AMERICAN CYCLES.

1889.

MANUFACTURED BY

Connolly & Jeffery M'F'G. Co

222 to 228 N. Franklin St.

CHICAGO.

U.S.A.

SHEIBER & CARQUEVILLE LITHO CO. CHICAGO.

Index 1889 Catalogue.

MACHINES.

	Page.
List of Patents	1
Greeting	2–3
American Champion Bicycle	4–9
" Light " "	10–15
" Challenge "	16–17
" Safety "	18–21
" Light Safety "	22–23
American Rambler Bicycle	24–25
" Ideal Rambler "	26–27
" " Bicycle	28–29
" " Tricycle	30–31
" Challenge Tricycle	32–33
" Ideal Tandem	34–35
" Challenge Tandem	36–37

SUNDRIES.

	Page.
Belts	60
Belt Pouch	56
Bells	39
Bicycle Stand	42
Blouse	58
Caps	58
Cements and Composition	49
Crank Extension	48
Crank Remover	66
Cyclometers	62
Enamel	52
Flag Staff	44
Handle Bar	78
Handles	38, 45
Handy Straightener	65
Home Trainers	61
Hose	59
Ideal Rack	42
Knee Breeches	57
Lamps	40–41
Lamp Supporters	41
Leggings	60
Locks	48
Luggage Carriers	50–52
Oilers	44–45
Oils	49
Pedals	46
Perfect-Fit Handles	38
Perfection Heater	44
Putz's Pomade	52
Rim Clamp	66
Saddles	53–54
Shirts	59
Shoes	57–58
Spoke Header	65
Spoke Wrenches	47
Steps	43–44
Tires	63
Tool Bags	55–56
Wall Brackets	43
Whistles	45
Wrenches	47

Points to be Remembered, 3d Page of Cover.

Practical Hints, Directions, Etc., Pages 63, 64.

Testimonials, Pages 21, 67–80.

Cabinet Photographs of any of our machines, 15 cents, postage paid.

TL 435 .G67 A43 1889

PATENTS

UNDER WHICH WE MANUFACTURE.

EMINENT counsel advise us that our patents cover all the fundamental features of the higher grade of Cycles. Our Ball-bearing Patent, having on the axle a stationary and movable collar on which the balls run, antedates the Bown and all other ball-bearing patents now in use.

Our bearing-claims cover the only automatic aligning and self-adjusting front wheel bearing, features which are indispensable to easy-running and enduring Cycle mechanism.

Our patents on Saddles cover every form of Hammock or Flexible Saddle having an adjustably fastened rear spring, without which a comfortable Hammock or Flexible Seated Saddle can not be produced.

We own the following list of patents, which we respectfully submit to the inspection of those who are informed or interested in the subject.

NO.	ISSUED TO	DATE.
194,421	John Smith	Nov. 20, 1877
259,313	Thos. B. Jeffery	June 13, 1882
275,917	" "	April 17, 1883
282,528	H. B. Hart	Aug. 7, 1883
285,891	Thos. B. Jeffery	Oct. 17, 1883
293,725	Chas. E. Duryea	Feb. 19, 1884
294,645	Freeman Lillibridge	Mar. 4, 1884
312,473	Thos. B. Jeffery	Feb. 17, 1885
314,701	W. D. McCoy	Mar. 31, 1885
333,128	Thos. B. Jeffery	Dec. 29, 1885
335,590	" "	Feb. 9, 1886
337,171	Freeman Lillibridge	Mar. 2, 1886
351,311	L. W. Conkling	Oct. 19, 1886
352,190	Thos. B. Jeffery	Nov. 9, 1886
352,191	" "	Nov. 9, 1886
354,907	" "	Dec. 28, 1886
355,321	" "	Jan. 4, 1887
358,932	" "	Mar. 8, 1887
359,608	" "	Mar. 22, 1887
359 609	" "	Mar. 22, 1887
365,074	" "	June 21, 1887
366,218	" "	July 12, 1887
366,775	" "	July 19, 1887
370,396	" "	Sept. 27, 1887
371,326	" "	Oct. 11, 1887
379,276	" "	Mar. 13, 1888
383,129	" "	May 22, 1888
383,130	" "	May 22, 1888
383,131	" "	May 22, 1888
384,980	" "	June 26, 1888
395,147	" "	Dec. 25, 1888

First Edition—1889—Greetings.

Once more, and for the eighth time, is it our pleasure to extend our hearty good wishes to the many agents, friends and patrons, by whose generous support and sincere and consistent coöperation we have been enabled to build up a cycle manufacturing business of a repute by no means limited by the confines of the United States, but recognized the world over as occupying a position in the very front ranks. As we look back upon the gradual but steady and healthy growth of the sport in this country, we can not but realize to what a large extent we are indebted to these good friends, and it is therefore particularly gratifying to us to be able to assure them that we have kept pace with the march of improvement, and offer in the American cycles for 1889 not only the longest and most varied line before the cycle-buying public, but of a quality and high standard of excellence that the most fastidious critic will not hesitate to commend. Another source of gratification, too, is the complete absence of any legal bugbear, which, in the hands of some of our competitors, occasioned annoyance in 1887 and 1888, as we have thoroughly demonstrated by the joint decision of Judges Blodgett and Gresham, after a long and expensive litigation, that our original machines contain no infringements of any patents belonging to others. So we begin the new year with a clean sheet, so to speak, and shall hope by sound business methods and integrity to merit the continued confidence of all.

The good things we have to offer in the way of novelties are our two rear drivers, the American Rambler and the Ideal Rambler. Many localities have developed so marked a partiality for this type of Safety that we have felt constrained to devote a deal of our best thought toward its perfection. The testimonials regarding the sterling qualities of the '88 Rambler would seem to indicate that we had satisfied every desire of its riders. We were not satisfied ourselves, however, and have succeeded in producing an open-fronted machine, which, while combining all the elements which were so popular in last year's wheel, admits of its being ridden by a lady. It steers more easily if anything, and contains many improvements of intrinsic worth, among which may be particularly mentioned our new drop forged chain, the only one we know of that is perfectly noiseless.

The Ideal Rambler is almost a duplicate of the larger wheel, and although intended primarily for the use of boys and girls, it is admirably suited to the needs of lady riders who do not measure for a larger ordinary than a 48-inch.

Beyond a very few details, scarcely worthy of notice here, the American Champion and Light Champion remain, as before, wheels of the highest possible grade in both construction and finish.

Readers will note a material reduction in the prices of the American Challenge, Safety, Light Safety and Ideal bicycles, all of which have received every care to maintain, and enhance if possible, their stanch reputation for reliability.

The American Ideal tricycle is also reduced in price, while the Challenge tricycle is constructed only with ball bearings all over.

Both the American Ideal and Challenge tandems, which have met with a large sale, much larger in fact than we anticipated during the past twelve months, have been improved in minor points, and are the only tandems manufactured that can be ridden over all sorts of American roads. The American Challenge Tandem is constructed only with balls all over.

We shall continue to make a specialty of manufacturing sundries, and shall be happy to quote discounts on these goods to the trade without regard to the sale of our cycles.

Competitive makers have long delighted in falsely claiming our material to be inferior, and we take this means of assuring our customers that we employ no deception or coloring in our descriptions, but call everything by its right name. We recognize in making high grade bicycles the necessity for proportion in the size of the parts to the wheel they go into. To illustrate: We make seven different lengths of axles and hubs for the front wheels alone, while others are satisfied with using two, or three at most. We have not, nor shall we in the future, make use of any metal which, according to our judgment, is not best suited to the purpose, and interested makers in stating otherwise deliberately misrepresent the facts.

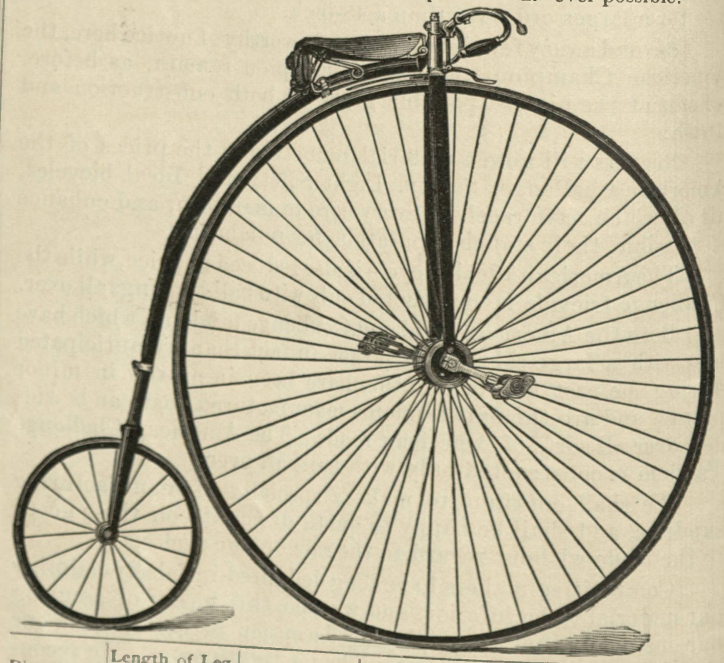
In conclusion we invite a fair and impartial criticism on the part of the cycling public generally, and any information not found in these pages will be cheerfully furnished on application.

GORMULLY & JEFFERY MFG. CO.

R. PHILIP GORMULLY, Pres. and Treas.
THOS. B. JEFFERY, Sec. and Manager.

THE AMERICAN CHAMPION.

The strongest, easiest and lightest running full roadster in the world. Fourth season of its production. Improved wherever possible.



Diameter of Front Wheel	Length of Leg, inside Measure, to Sole of Foot.	Price, Standard Finish. Per Specification.	Price, all parts Nickeled except Wheels.	Price, full Nickeled, including Wheels.	Weight.
48	31½	$100 00	$105 00	$110 00	43
50	32½	102 50	107 50	112 50	44
52	33½	105 00	110 00	115 00	45¼
54	34½	107 50	112 50	117 50	46½
56	35½	110 00	115 00	120 00	47¼
58	36½	112 50	117 50	122 50	49
60	37½	115 00	120 00	125 00	50

If nickeled spokes are desired with the standard finish or half-nickeled bicycles, the cost will be, additional, $2.50.

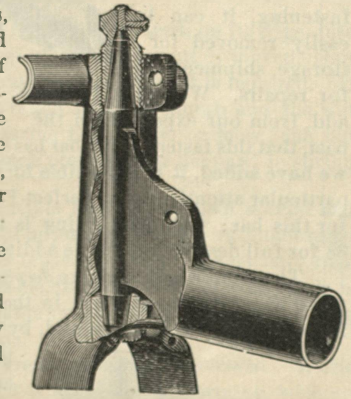
If desired with Perfect-Fit handles (see page 38), extra, $2.50.

The "American Champion" will be furnished in sizes below 48-inch at the same price as the 48-inch, and intermediate sizes above 48-inch at same price as the size next above.

For Parts, Telegraph Code, etc., see Special Catalogue, which is mailed on receipt of 1-cent stamp.

DESCRIPTION.

The American Champion is principally designed for road use. It is handsome in finish, graceful in outline, and built in all its parts with a view to strength and rigidity, with the least possible weight. The material used in its construction consists only of drop forged and pressed steel, excepting the gun-metal hub, which is described later, and every care has been maintained in the distribution of metal to properly endure the strains it is liable to be subjected to.



The head, neck, bearings, spokes, rims and pedals are made of forged and welded steel, the rear fork being of the modern shell or semi-hollow pattern, formed of steel in one piece. The backbone is 1⅛ inches diameter, of the *choicest imported* weldless steel tube, properly tapered and brazed to the rear fork and neck.

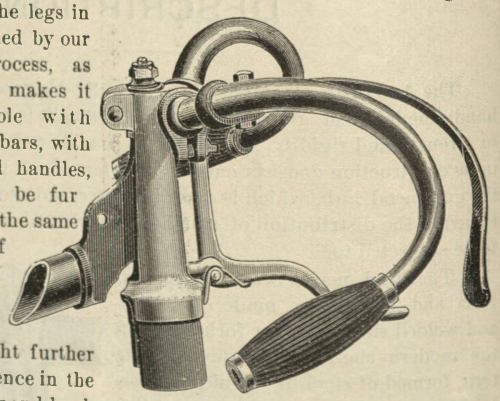
The front forks are made of the same tubing, rolled to an elliptical section, tapered and brazed to the head and fork ends. This shape and quality of material insures extreme rigidity and strength.

The front fork ends are the same as the ones that have hitherto been confined to the Light Champion. (For description, see page 11.)

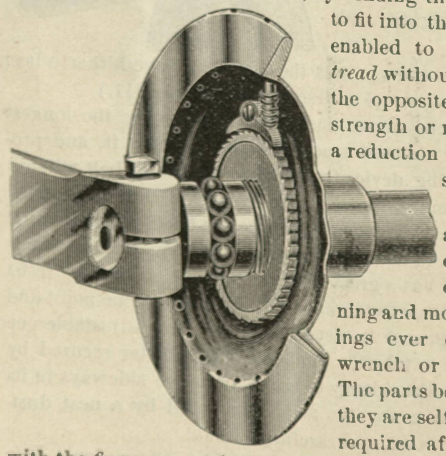
The head is of our well-known closed pattern, having the longest and most rigid neck in the shortest space possible to place it, and provided with our patent clamping device for securing the center bolt without a lock-nut. This construction is shown in cut, where it will be noticed that the upper part of the neck extends clear above the head, a feature that cannot be produced in any head as ordinarily made; and the construction is such that the neck employed has a greater lateral bearing surface to resist the tendency of all necks to wear oval, and thus be loose at one point and tight in another. The sockets are hardened steel, and the adjustable one requires no extension above to take the jamb-nut, but is better secured by clamping its sides, resisting all tendency to loosen or move sideways in its threaded fitting. The opening for the neck is covered by a neat dust-shield. The leg guard is of steel, and carefully fitted.

Our patent rams-horn bar is used on the American Champion. It is hollow, of one piece throughout its length. It terminates in spade grips

with all the advantages of the spade handle, but without its disadvantages, and is stronger and lighter, has a better rest for the hands in steering and a better support for the legs in coasting, and is fastened by our patent clamping process, as shown in cut. This makes it readily interchangeable with dropped or cow-horn bars, with spade or pear-shaped handles, either of which will be furnished, if desired, at the same cost. By this means of fastening, it can be easily removed for storage, shipment, or for repairs. We might further add, from our experience in the past, that this fastening and bar has *no superior*, and, with the improvements we have added, it is impossible for it to become loose. We desire to call particular attention to our Perfect-Fit Handles, which were made especially for this bar; with them riding is the perfection of comfort. (See page 38 for full description.) The additional charge for them is only $2 50.



The front wheel has large *deeply recessed gun-metal hubs* (see cut) firmly fitted on a long tapered seat in the axle, preventing any possibility of the hubs slipping on the shaft; and, by bending the ends of the front fork-ends to fit into the recess of the hub, we are enabled to get an exceedingly *narrow tread* without altering the angle between the opposite spokes, or lessening the strength or rigidity of the wheel, which a reduction of the angle would necessarily involve.



The Patent Ball Bearings, as applied to the front wheel of the Champion, are, without question, the easiest running and most readily adjusted ball bearings ever designed, no screw-driver, wrench or other tool being required. The parts being almost self-adjusting, as they are self-aligning, the only operation required after a year's wear is to turn with the fingers a ratchet wheel about one-twentieth of a revolution, a pawl or dog admitting of such movement, and securing it wherever placed. The parts constituting the bearing consist of the spherical case used in former years, fitted to a globe-shaped cavity at each of the fork ends, and containing an annular groove for the balls which also forms an oil chamber. The balls (see cut) roll in this chamber and on the curved edges of hard steel rings or sleeves, that are fitted to the shaft. The rings are arranged to revolve only with the shaft, the outer one supported by the crank and the inner one by a nut whose back bears against the hub; the nut has threads conforming to the screw cut on the inner ring or sleeve; this sleeve can only move on the shaft endways, and the parts are of such size that the two steel rings with the balls between them and the nut on the inner end of one exactly fill the space between the crank and hub, and the result of turning the nut in one direction is to force the rings closer together, and in the other direction to allow the balls to move the sleeves apart.

The nut is circular in outline, and provided with teeth on its edge, into which a dog or pawl is arranged to drop whenever the nut is moved, thus preventing any displacement until a change of adjustment is required. If the bearing is too tight the dog can be raised with the thumb and the nut moved back with the fingers; if the bearing is too easy, or loose, the nut can be turned forward and another notch presented for the pawl to spring into.

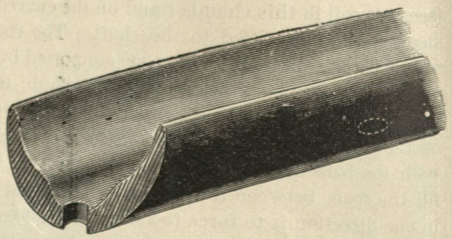
The cranks are of drop forged crucible steel, of our own special and patented design, with three recesses for adjustment and secure attachment of the pedals. The choice of two sizes is given. With our very easy running wheels the medium crank adjustable from 5¼ to 4½ and 3¾ inch is preferred for average roads, but the large crank adjustable from 6 to 5¼ and 4½ inch will be supplied if desired.

In attaching the crank to the axle great care has been bestowed. While every other manufacturer in the world is satisfied with forming, with an ordinary drill, or reamer, a round smooth hole in the crank and turning a round plain end to the axle, holding one to the other by a simple key driven in a space formed where their surfaces meet, we have devised and at great expense provided machinery to form grooves and ridges lengthways on the axle, fitting to corresponding ridges and grooves in the aperture of the crank. A screw passing across the back of the crank and fitting in a transverse channel near the end of the axle, locks the ridges into grooves and prevents the crank from turning on the axle or moving endways thereon. This arrangement of parts makes the work of detaching or securing very rapid, and the grip resulting is not only very powerful, but is produced by a thinner boss on the crank than is usually formed, consequently the spread of the feet is less without diminishing the spread and width of the spokes at the hub.

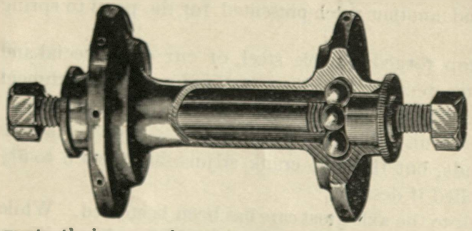
The spokes are made of the best No. 12 *steel wire*, capable of being stretched fully one inch before breaking, thickened at the hub and rim, and tested by a machine made for the purpose to a strain of 770 pounds each,

and are amply sufficient in number to support the rim at all points. The axle is of *forged steel*, carefully fitted to the bearings, and of material especially selected from its adaptation to this peculiar work.

The rims are of the choicest quality semi-hollow steel, the strongest material and the most durable pattern we know of; and, as shown by the engraving, the heaviest part of our rim is not divided by spoke holes, whereas the common or crescent rim, having its thickest portion drilled, is considerably weakened, and explains the difference found to exist in the strength of the wheels of our make and of others.

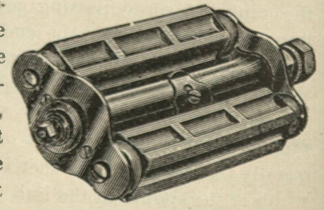


The tires are of *moulded red Para rubber*, 1 inch in diameter on the front and ⅞ inch on the rear, the latter being 17 inches for sizes 54 inch and above, 17x¾ for 52 inch, and 16x¾ for 50 inch and below. The rear wheel is fitted with the Smith patent *ball bearings*. The hubs are of gun-metal with single rows of balls at each end, set in the hardened cases in a way which prevents their escaping when the wheel is removed for cleaning, and fitted to the forks by means which admit of its easy adjustment (see cut).

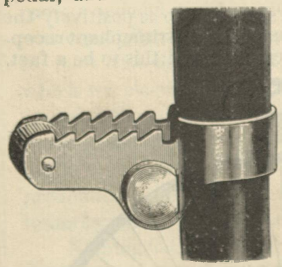


The balls used in all the bearings are of the finest steel, perfectly spherical, and gauged to the 2000th part of an inch, giving an absolute accuracy in fitting, and rendering absolute evenness in wear.

The Smith patent ball bearing and nickel plated pedal (see cut) is used on the Champion. The shaft is steel, accurately fitted, and the end plates are stamped out of rolled steel plates. The pins are square, and instead of being riveted at both ends, as is usually the case, are fitted with a screw at one end, so that the plate can be taken off to remove the rubber, if necessary. The steel balls at either end are contained in hardened steel cases. All joints are dust-proof. The pedal rubbers are white and corrugated, and of our special pattern. They conform to the shape of the foot in any position assumed by the



pedal, and the foot does not slip off or tire with long riding. Rat-trap pedals will be furnished instead at no extra charge if desired. We supply any saddle of our manufacture with the Champion, but unless otherwise specified the Cobblestone will be furnished. The step used is very light and neatly made from cold rolled sheet steel, of the G. & J. pattern, adjustable to height or angle. All parts of the standard finished bicycles, except the head, saddle-spring, handle-bar, brake, cranks, pedals and step,



which are polished and nickel plated, with a coat of copper underneath the nickel, are finished in jet black enamel of the finest quality, which is carefully applied and baked so that the luster is enduring and impervious to moisture or oil, and in a great degree to blows and bruises. The American Champion is provided with a nicely finished tool-bag, containing a nickel-plated oil can and set of steel drop forged wrenches, guaranteed to fit every nut and screw head. Duplicate interchangeable parts can always be had from the factory, but we guarantee our Champion to be the most difficult to injure and the most readily repaired of any bicycle in the market.

The American Champion and Light Champion hold all world's road and long-distance records of importance, notwithstanding the repeated efforts of competitors to acquire them.

SEVEN THOUSAND MILES IN FIFTEEN MONTHS, AND NO REPAIRS WORTHY THE NAME.

NEW ORLEANS, June 20, 1888.

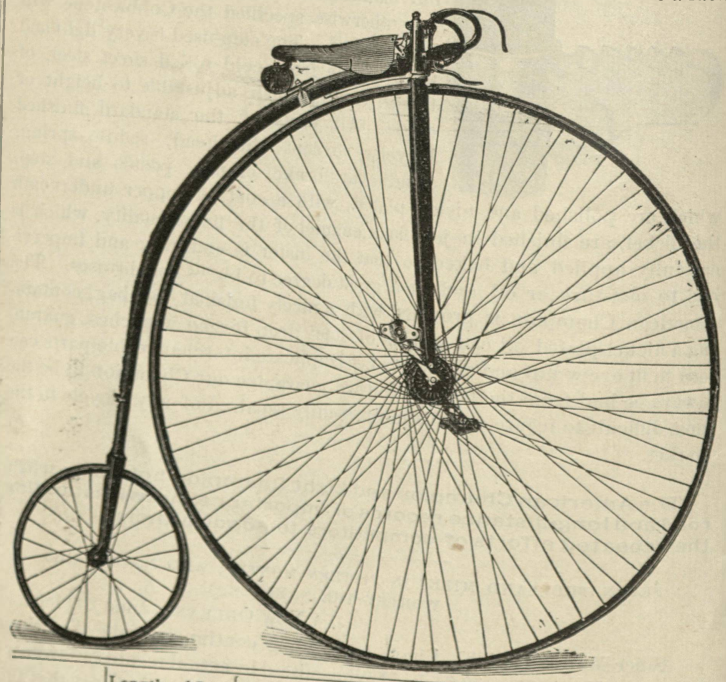
Since March 27, 1887, I have been riding continuously the American Champion No. 5425 — 50-inch— having missed by actual record but twenty-one days' riding since that date, and I am pleased to be able to say that the wheel has stood the racket in true championship style. "Old No. 5425" has been in races, in century runs, in twenty-four-hour rides, and over all sorts of roads, good, bad and indifferent, about as often as any wheel in this neighborhood, and to-day I do not fear comparison with any bicycle on the market, believing that a comparison, piece by piece, or in general appearance, will satisfy any unbiased mind that my Champion is still in A No. 1 condition, and fully the equal of any $140 or $150 machine in use. Since August 1st, when I purchased a Cyclometer, to the present moment, my wheel has been ridden 4,251 miles, and no repairs worthy the name have been required, although I estimate that "5425" has traveled pretty close to 7,000 miles in its fifteen months' service.

RITCHIE G. BETTS,

Capt. Louisiana Cycling Club, and Sec.-Treas. La. Div. L. A. W.

THE AMERICAN LIGHT CHAMPION

we conscientiously offered to our patrons two seasons ago as positively the highest grade light roadster on the American market. Its triumphant reception at the hands of the cycling public has demonstrated this to be a fact.



Diameter of Front Wheel	Length of Leg, Inside Measure to Sole of Foot.	Price, Standard Finish. Per Specification.	Price, all Parts Nickeled except Wheels.	Price, full Nickeled, including Wheels.	Weight with all on
48	31½	$115 00			
*50	32½	117 50	$120 00	$128 00	36
52	33½	120 00	122 50	130 50	36½
54	34½	122 50	125 00	133 00	37
56	35½	125 00	127 50	135 50	37½
58	36½	127 50	130 00	138 00	38
60	37½	130 00	132 50	140 50	38½
			135 00	143 00	39

If full nickeled spokes are desired with the standard finish or half-nickeled bicycle, the cost will be, additional, $5.50.

The "American Light Champion" will be furnished in sizes below 48-inch at the same price as the 48-inch, and intermediate sizes above 48-inch at the same price as the size next above.

If desired with Perfect-Fit Handles (see page 38), extra, $2.50.

The American Champion will be furnished with our semi-hollow rim at $10 less than above prices.

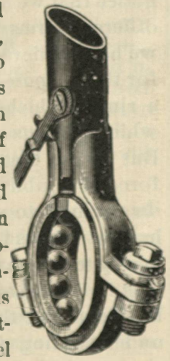
DESCRIPTION.—With the rapid growth of cycling in this country came a demand from the more mature and expert riders for a bicycle that was especially rigid and somewhat lighter than the full roadster, and it was to meet this demand that we designed the American Light Champion, which we placed on the market in the spring of '87. We shall always recommend the regular Champion as the best wheel for all around road use, touring, and all cases where a necessity for repairs becomes a serious matter; but in the hands of skillful wheelmen and in a country where good roads predominate the Light Champion has become a great favorite. See our remarks regarding the career of this wheel on pages 14 and 15.

Nothing but drop forged and pressed steel is used in the construction of this machine, excepting in the hub, which is described in its proper place.

The backbone is made of the choicest imported weldless steel tubing, very light, but with the strength preserved.

The rear fork is of the modern shell or semi-hollow pattern of heavy sheet steel.

The front forks are made of the same tubing, rolled to an elliptical section, tapered and brazed to the head and fork ends.



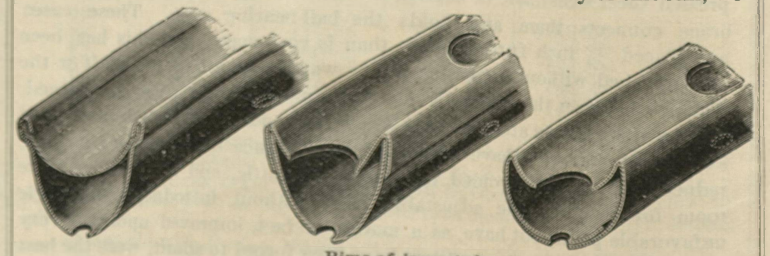
Our fork end as used on the Light Champion, is a radical departure from all other forms, and even from that formerly used exclusively by us. It still retains the self-aligning feature, one of the secrets of the easy running qualities peculiar to our wheels; but it is chiefly distinguished from other types by its excessive lightness, a point, however, usually known to repairers, who alone are conversant with the amount of metal used in the ordinary hollow fork end, both inside and out. In this there is no metal in the inside at all, the end being entirely open, thus dispensing with the air-hole within most forks, and permitting any superfluous brazing substance, arising from joining the head, to escape, so that nothing can remain in the fork to cause it to rattle. The parts forming the actual fitting are for the most part of hot-pressed sheet steel made in expensive dies. A forged steel brace connects them and holds the ball-bearing case. These cases are placed ½ inch further apart than is customary, and this has been accomplished without increasing in any way the length of the shaft or the distance between the pedals, so our well-known narrow tread is retained. The results we have attained in this new fork end may be briefly described as follows, viz: We have increased the distance between the bearings, reduced the weight, avoided the danger of rattle, and have given more room for reaching the adjustable parts without introducing a single unfavorable point, but have, as a matter of fact, improved upon the very parts which, even our competitors have been forced to admit, were the best features of our original machines.

The head is the same as the Champion which is described on page 5.

A NOTEWORTHY FEATURE

is the Light Champion neck, which is made in conformity with one of our latest patents, is constructed of the toughest steel obtainable, and has its cylindrical fitting in the backbone tube extended rearwardly a greater distance on the lower side than other manufacturers consider necessary, with its upper side much shortened. The entire cylinder is bored out, leaving the metal one-tenth of an inch thick at its sides and end. This boring reduces the weight of the neck five ounces and does not diminish its strength, but, on the contrary, positively increases the strength of the backbone, both by lessening the weight and force of the blows that the neck can impart to the backbone, as well as relieving the backbone of any exact rigid ending at the juncture of the neck and tube, which in all other forms causes the part immediately back of the neck forging to be the weakest part of the structure, instead of being, as it should be, the strongest.

Readers of our catalogue for several years past can not have failed to notice that we have been very conservative in regard to adopting any of the different forms of hollow rims produced before the close of 1887, because we have believed, and do now, that none of them were as well calculated for the purpose as our semi-hollow rim, which we use on the Champion; a rim to which we have given some of our best thought and study, and which has successfully stood the severest tests offered by American roads. But seeing that our competitors were, without exception, endeavoring to force the public into believing the hollow rim a necessity, we long since determined to meet them on their own ground by inventing a practical hollow rim, and one which would avoid much of the criticism the ordinary types were naturally open to. This we accomplished in the Light Champion rim of to-day, which combines the lightness of the common tubular forms and the strength of our semi-hollow pattern. To give a proper understanding of the radical improvements and the novelty of this rim, we



Our design, having no holes in outer shell.

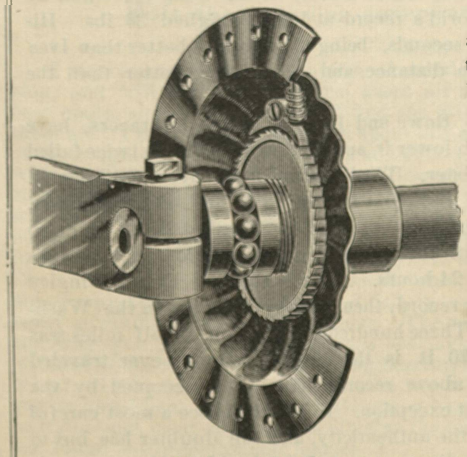
Rims of imported pattern used by other makes, weakened by unnecessary drilling to insert spokes and nipples.

illustrate the variety most generally used. It will be noticed that a large hole has to be drilled in the outer shell and directly over the nipple hole in the inner shell for the nipple and the nipple wrench. The absence of metal in the vital part necessarily has a very weakening tendency, as has also the annealing process incident to brazing through its entire length. A further and marked improvement is that our rim is rolled absolutely round, and is not turned up by the nipples, so that we avoid unevenness of tension on the different spokes. We have succeeded, too, in perfecting machinery enabling us to use cold and rehardened sheet steel smoothly finished and capable of being nickel-plated—formerly deemed an impossibility by manufacturers of imported patterns whose rims have to be heated and brazed along the sides, and presenting a combination of both cast brass and annealed sheet steel, the rough surfaces of which nickel plating can not entirely conceal.

From the foregoing description and illustrations we think the reader will concede that we have avoided every defect of the former types, and that we can justly claim the strongest, handsomest, most durable and the only entirely successful hollow rim extant.

The leg guard, handles and handle bar are the same as those used on the Champion.

The front wheel hub is similar to the one used on the Champion in most points, but is made of the best quality of cast steel. It is also corrugated, which materially lessens the weight. It is handsomely finished in nickel and enamel. A favorite theme with the interested trade is their criticism on this other strictly original portion of our wheel. We have never known one to break or bend. It is the lightest and strongest hub in use, and we challenge our competitors to produce a better one. The cut will give the reader a comprehensive idea of how it is formed.



Hub and Bearing.

The spokes, which are of a true tangent form and are tied seven times between the hub and rim, are made of the best No. 13 *steel wire*, thickened at their connection with the rim, headed at the hub, and of amply sufficient number to support the rim at all points. They are placed all on the outside of the hub, to give them the greatest spread possible in the limited distance between the forks.

The tires are of *molded red Para rubber*, ⅞ inch in diameter on the front and ¾ inch on the rear, the latter

being 17 inches for sizes above 52 inches, but below that size 16 inches are used.

The rear wheel has a tangent spoke, and is fitted with the *Smith ball bearings*. The hubs are similar to the ones used on the rear wheel of the Champion (see cut, page 8), but lighter.

We supply any saddle of our manufacture with the Light Champion, but unless otherwise specified the Wonder will be furnished. (See cut.)

The standard finish of the Light Champion is black enamel for the forks, backbone, rim and part of the spokes; all other parts, including the hubs and ends of the spokes near them, are nickel plated, and, as we have no seam in the rims to conceal with enamel, we can supply the tangent wheels full nickeled, including everything.

All the remaining parts used in the construction of this wheel are similar to those used on the regular Champion, and a further description is unnecessary.

From our 1888 Catalogue:

The Career of the American Light Champion.

"The building of a high grade true tangent spoked roadster to successfully stand the strains of a first season was never thoroughly accomplished in this country until the Light Champion made its appearance on the American market. This wheel, however, at once commanded the respect of dealers and buyers, and in competition with representative makes of both English and American manufacture has, in nearly all of the important instances, finished far in the lead. Truly a remarkable showing for a new wheel. By coming over the tape first in the majority of the track races in which it was entered, during the season of 1887, it established the fact that although much heavier than the racing wheels employed by our competitors, it was easier-running. The wheel used by Frank Dingley, when he made his famous 100 mile world's record at Lynn, weighed 36 lbs. His time was 5 hrs. 38 min. 44¼ seconds, being 25 minutes better than Ives' American track record for the distance, and 11 minutes better than the world's.

"Since the performance, Rowe and Rhodes, on 22 lb. racers, have made unsuccessful attempts to lower it, and Hollingsworth has twice failed on a competitor's light roadster. The old-time little flyer, Stillman G. Whittaker, at Crawfordsville, Ind., last fall rode a 40 lb. Light Champion, on a 52½ mile course, the enormous distance of 323 miles in 24 hours, so that this machine, together with the regular Champion, holds every world's road record, from 10 miles to 24 hours. Later in the fall Frank Dingley started for the indoor 24 hour record, then held by Morgan, in the Washington rink at Minneapolis. Three hundred and fifty and a half miles was the distance, and by over 20 it is the largest mileage ever traveled by a bicycle in a day. The above records have been accepted by the American cyling press without exception. In each instance a most careful investigation was made as to the authenticity, and the doubter has but to correspond with any of the cycling papers to become himself convinced.

Among the many other victories of this machine may be mentioned the North Attleboro professional handicap, when L. D. Munger defeated a large field, including Rowe and Hollingsworth, the latter, too, with a start of 25 yards. Also the tournament at New Orleans, Memphis, Clarksville and Paola, where the Light Champion won a majority of the events.

"We have greatly improved it, as will be seen by comparing the description of this year with last. In material it is par excellent, and in strength it has no peer. Every criticism, whether from friend or foe, has been carefully and impartially considered. We know it to be the most expensively constructed machine of its class, and although it is listed at a very reasonable price, it is because of our superior facilities for its manufacture; so that riders of this season's Light Champion will have a mount which, in elegance, strength, durability and easy running, leads the world."

The season of 1888 was not productive of many remarkable performances. Few of the manufacturers had teams in the field, so that most of the running was by amateurs. As the Champion and Light Champion road records still remain untouched for the most part, we have been content to rest on our oars; still at all of the tournaments our wheels came nobly to the front, winning in many instances every event on the program. Mr. J. V. L. Pierson, of the Bloomfield (N. J.) Cyclers, distanced all previous crank records on the celebrated Eagle Rock Hill, near Newark, when he went up four times, using the ordinary 5½ inch cranks. Bert Myers, of the Peoria Bicycle Club, closed the season at Chicago, when he captured the American amateur 24-hour road record by riding 289 miles in that time on an ordinary Light Champion.

Note the following commendatory letter.

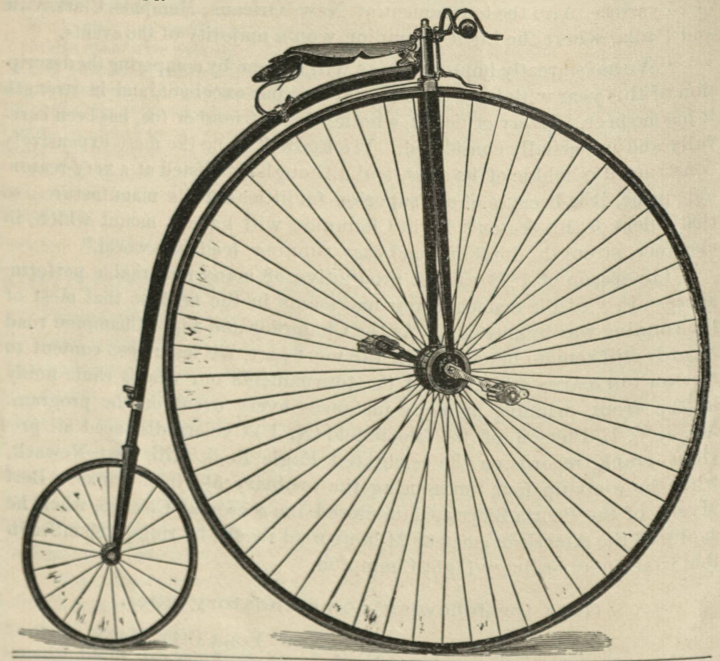
NEW YORK CITY, May 4, 1888.

I received from you on the 10th of April an American Light Champion, and will say I have ridden about all the bicycles that have ever been made, and, without doubt, I find the Light Champion the finest of them all. I have ridden my wheel about 275 miles so far, and over some of the roughest roads of New York and Jersey (and I suppose you know what they are). I rode from the Club House to Hackensack, and coasted Englewood Hill the whole length, having on the pair of racing bars you sent me not long ago. I would have liked to use my brake, but as I did not have a lever on I could not. When I got to the bottom I found my wheel in as good condition as when I started, and as I look at it, if the Light Champion will coast down a hill like the one just mentioned, it will stand almost any kind of rough roads. I find in your make of wheel a great many advantages not found in others. The most important one of all is the way you have of adjusting the bearings in the front wheel. It is without doubt the simplest adjusting bearing that I have ever seen on any wheel. I also find this year's rim to be the strongest that has ever been put on any wheel. I find the ball-bearing head to be of great advantage, as it does not need adjusting as often as the old style, and, in fact, I have not found one objectionable feature.

Yours respectfully, E. E. BRITTON, 26 West 23d St.

THE AMERICAN CHALLENGE,

after a thorough test for the past four years, in all parts of the United States, has proven itself to be emphatically the Best and Most Durable Roadster for the Money ever placed on the Market.



Diameter of Front Wheel.	Length of Leg inside Measure to Sole of Foot.	Price Standard Finish, per Specification	Price all Parts Nickeled except Wheels.	Price Full Nickeled Including Wheels.	Weight.
48 inches.	32 inches.	$65 00	$70 00	$75 00	45
50 "	33 "	67 00	72 00	77 00	46
52 "	34 "	69 00	74 00	79 00	48
54 "	35 "	71 00	76 00	81 00	50
56 "	36 "	73 00	78 00	83 00	52
58 "	37 "	75 00	80 00	85 00	53½
60 "	38 "	77 00	82 00	87 00	55

This wheel has parallel bearings all over, but can be fitted with ball bearings at the following additional cost:

Ball bearings to front wheel only,	$7 00
" " rear " "	4 00
" " pedals,	5 00
If with solid ram's-horn bars, extra,	1 50
" " " cow-horn handle bars, with spades, extra,	1 50

If nickel spokes are desired with the standard finish or half-nickeled bicycles the cost will be an additional $2.50.

The American Challenge will be furnished in sizes below 48 inch at the same price as the 48-inch, and intermediate sizes above 48 inch at the same price as the size next above.

DESCRIPTION.

It has been our aim to produce in the American Challenge a bicycle for a very large class of buyers, who either do not wish to invest as much money as the purchase of a Champion would necessitate, or riding perhaps for the first season, do not care to subject a high grade mount to the rough usage of the beginner. This aim has been fully accomplished, and the American Challenge stands to day far above any other medium grade machine in elegance of model and stanch and reliable construction. In appearance and in many essential features the Challenge follows the Champion closely. The forks are solid, however, and made of forged steel of superior quality. All the tubing is imported and weldless. The head and neck are similar to the Champion as described on page 5. The bearings are the well-known G. & J. parallel, unless ball-bearings are ordered. The wheels have large gun-metal hubs, and thickened No. 12 steel wire spokes. The cranks are adjustable, and of a very strong design. The axle is of forged and hardened steel, carefully fitted to the bearings. Rims of the best quality semi-hollow shaped steel. Tires of molded red Para rubber, 1 inch diameter on the front wheel. The rear wheel is 17x⅞ inch diameter for sizes above 54 inch, 17x¾ inch for 52 inch, and 16x¾ inch for 50 inch and below. Handle-bars are of steel, and in one piece.

The cow-horn handle-bars we recommend, and always furnish them unless another form is mentioned in the order.

The Challenge pedals are of white, square, corrugated rubber, and have plain bearings, but are otherwise similar to Champion pedals.

The pedal pins have dust-proof caps on their ends.

The celebrated Lillibridge saddle is furnished with this machine, but either the Wonder or Cobblestone will be furnished at an extra cost of $1.00.

Step is adjustable for height or angle, and rubber covered.

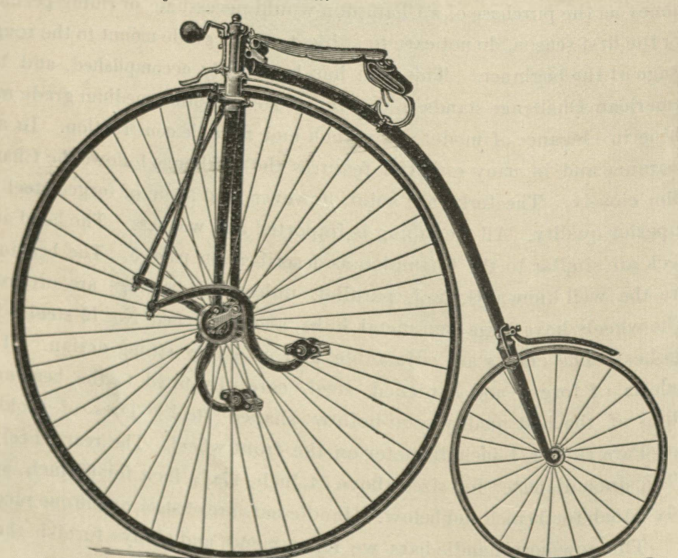
Rear wheel bearing is of steel, and with dust-proof cones.

All parts of the standard finished bicycles are finished in jet black enamel, except the head, saddle-spring, handle bars, brake, cranks, pedals and step, which are polished and nickel-plated, with a coat of copper underneath the nickel.

All bicycles are provided with a set of solid steel wrenches, and also a nickel-plated oil can, contained in an improved, easily reached tool bag.

THE AMERICAN SAFETY BICYCLE.

We beg to call the particular attention of veteran as well as new riders to the description of this machine, which we guarantee to be the easiest running type of bicycle in the world.



PRICE LIST.

Diameter of Front Wheel.	Reach Measured by the American Champion.	Price of Standard Finish.	Price, all Parts Nickeled except Wheels.	Price, full Nickeled including Wheels.	Weight
42 inches.	The reach of .48 to .50	$71 00	$76 00	$81 00	51 lb.
44 "	" " .52 to .54	73 00	78 00	83 00	52 "
46 "	" " .54 to .56	75 00	80 00	85 00	53 "
48 "	" " .58 to .60	77 00	82 00	87 00	54 "

Ball bearings to front Wheel (see Challenge), - - extra,	$ 700
" " rear wheel " - - - "	4 00
" " crank pins - - - - - - "	8 00
If with solid cow-horn handle-bar, extra, - - - - -	1 00
" " " " with spades, extra. -	1 50
" " ram's-horn bars, extra, - - - - -	1 50

If nickeled spokes are desired in the standard or half-nickeled bicycles, the cost is $2.00 additional.

For Parts, Telegraph Code, etc., see Special Catalogue, which is mailed on receipt of 1-cent stamp.

DESCRIPTION.

Perhaps the most peculiarly original bicycle of our manufacture is this excellent type of Safety. It has been on the American market now for four years past, and has more riders to-day than the combined number of all other front-driving Safety machines. It is not as speedy as the Rambler, but among conservative men who desire a safe and easy-running mount, something between the extremes of the ordinary and the dwarf machines rather than excessive speed, we believe the American Safety will always remain a favorite.

SPECIAL ADVANTAGES.

Its remarkably easy running qualities.

Its ease of mount and dismount.

Its safety in night riding, and over very rough roads.

Its great power as a hill climber.

Its great ease of pedaling, produced by the slightly elliptical motion of the pedals, which gives the most extended line of power to be found in any machine in use; and its movement so nearly resembles walking that beginners can accustom themselves to it rapidly, and ride almost from the start.

Its freedom from the danger of headers.

It can be ridden off the ordinary sidewalks without the rider's being thrown from his seat, and if a fall does accidentally occur, the rider is so near the surface that there is little liability of injury.

Its appearance, which is the nearest approach to the ordinary of any of the Safeties, and avoids the comment so disagreeable to the sensitive.

Its ease of steering, as the rider's weight is so largely over the steering wheel, and it is free from any unnecessary or complicated appliances.

The safety is attained by placing the weight of the rider much nearer the ground than in the ordinary machine, and farther back. To do this, the front wheels are made smaller and the rear wheel larger. The upright position of the rider and the direct downward thrust of the feet are secured by placing the ordinary bicycle pedals on levers that are hung below, and extend to the rear of the crank a suitable distance to effect this result. By connecting the front end of the levers to a swinging tubular rod, the pedals move in an almost perfectly oval curve, and avoid the jerky movement caused by the rapidly descending and slowly ascending pedal movement of similar Safety machines that do not have the swinging rod.

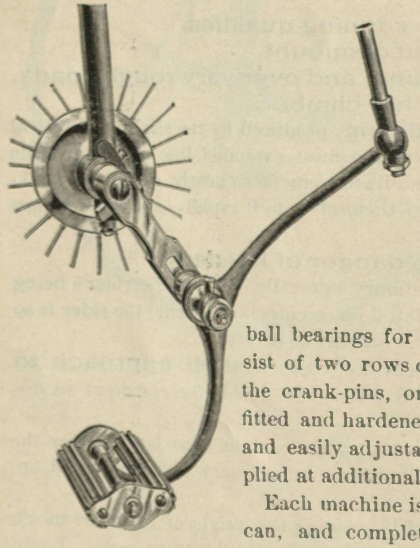
The forks, head, neck, bearings, spokes and rims are made of selected steel. The backbone is 1¼ inches diameter, properly tapered and secured to the rear fork and neck; the head is of our well-known closed pattern.

The bearings are few in number, are as nearly dust-proof as possible, and are adjustable.

The hubs are large and of gun metal, well fitted to the axle, which latter is of forged steel, and carefully fitted to the bearings.

The spokes are made of No. 12 steel wire, thickened at both ends.

Rims are of the best quality semi-hollow shaped steel. Tires of molded red Para rubber, 1 inch diameter on the front wheel and ⅞ inch on the rear wheel; the latter is 20 inches in diameter. Handles are ebonite. The handle-bars are of one piece throughout their length, and interchangeable.



Step is adjustable. Rear wheel has a mud guard. Its bearings are of hardened steel, with dust-proof cones. The pedal rubbers are white. The crank pin is parallel, and well fitted to the sleeve with dust-proof caps on the end.

We would like the reader to particularly note our new ball bearings for the Safety levers. They consist of two rows of steel balls which work on the crank-pins, on either side of the carefully fitted and hardened steel cases, and are perfectly and easily adjustable. This bearing can be supplied at additional cost, as per price list.

Each machine is furnished with a tool bag, oil can, and complete set of forged nickel-plated wrenches.

The joints on the levers consist of a ball and socket, so that an accident that bends either the levers or the cranks will not cause the machine to turn hard in consequence.

The connecting rods and pedal levers are hollow and exceedingly strong.

The well known Lillibridge hammock saddle is used, but either the Wonder or Cobblestone will be furnished at $1.00 extra.

OUR ORIGINAL TYPE OF SAFETY.

To-day for Conservative Riders the Best Bicycle Produced.

INDIANAPOLIS, IND.

In the language of the brother who arises in prayer meeting and begins by saying "I have something on my mind that I want to say," so I arise to remark a few things. There is no far-fetched connection between wheels and religion. They are very closely allied, in my make-up at least. I believe in bicycling all over. I am sorry that St. Paul didn't have one. I think if he had, instead of walking all over the Roman Empire, he would have ridden his bicycle and thus have accomplished twice as much, and the millennium would have been a good deal nearer. I believe the day will come when all preachers will ride wheels. It may be that a good many must die first, but for all that the time is coming when "the parson's one-horse chaise" will be a handsome two-wheeler. I believe that when the brethren once get caught up in the fraternity of wheelmen, they will forget to fall out over the differences of creed. Just across the street is an Episcopalian who has very little respect for my meetin' house, but who is a jolly good fellow on the wheel.

There is only one reason that it isn't a fit thing that I should ride your Safety. I am considered such an everlasting crank that I ought to ride a crank wheel, but I am willing to sacrifice a little harmony for the sake of safety and sense. Your wheel, as per ad, ordered to be ridden by Mr. Hunter, came O. K., and is a beauty. I almost wish I hadn't bought my wheel until next year. Mine was made in March and his in June, and there are so many improvements that it almost made me sick. As the boys say, "if you don't get there" it will be a wonder. But with all that you may do, I want to say that you have got, when all things are considered, the best all-the-year, rough-road, smooth-road, rain, sun, mud and dust wheel I know of. My Light Safety I regard as a first-class wheel. Of course I am heavy and hard on wheels, but I advocate the wheel for business and not the race track. I practice what I preach. I ride my wheel summer and winter, through rain and snow, on smooth roads and on rough, and of course anything that will stand me is pretty well tested. I am just going off on a campaign over the eastern and northern part of the State, taking my wheel as naturally as I would my boots. For example, I will preach to-morrow at Muncie, and then go twenty or thirty miles to preach in the evening. I will doubtless send you the names of persons to whom catalogues may be sent with possible profit.

I am most heartily yours,
G. L. McNUTT.

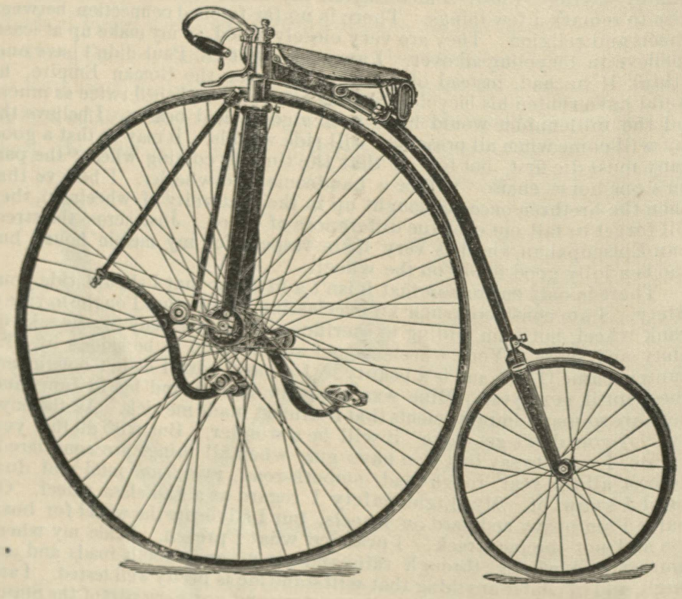
CHICAGO.

GENTLEMEN — Having had two years' experience with the American Safety, which I have used to such an extent as to acquire the appellation of "bicycle crank" from my professional associates, I desire to commend this wheel, first, as a means of healthful exercise, especially suited to young and middle-aged men of sedentary habits; secondly, as a practical means of rapid locomotion, and third, as a safe and easy machine for timid or elderly riders, and for rough roads and night riding.

Yours very truly, WALLACE K. HARRISON, M. D.,
295 N. State St.

THE AMERICAN LIGHT SAFETY BICYCLE,

OF HIGHEST POSSIBLE GRADE.



PRICE LIST.

Diameter of Front Wheel.	Reach, Measured by the American Champion.	Price of Standard Finish.	Price, all Parts Nickeled except Wheels.	Price, full Nickeled including Wheels.	Weight
42 inches.	The reach of .48 to .50	$100 00	$108 00	$113 00	44 lb.
44 "	" " .52 to .54	102 50	110 50	115 50	45 "
46 "	" " .54 to .56	105 00	113 00	118 00	46 "
48 "	" " .58 to .60	107 50	115 50	120 50	47 "

If nickeled spokes are desired in the standard or half-nickeled bicycles, the cost is $2.50 additional.

If Perfect-Fit handles are desired (see page 38), extra $2.50.

DESCRIPTION.

We introduced this machine in the spring of 1887 at the earnest solicitation of the army of our regular Safety riders, who insisted that a bicycle of the highest grade and after the same lines was a necessity. In the American Light Safety this is more than accomplished, and we can honestly claim that it is now perfect in all particulars. We have improved it from time to time as occasion suggested, and believe and know it is the perfect machine of its type. Of its running qualities it is not necessary to remark beyond the fact that it is naturally somewhat lighter than the regular Safety, which we have always claimed and many times demonstrated to be the easiest-running bicycle of any sort or description in the world.

It has ball bearings to both wheels, and also to the crank pins.

The front wheel has a $\frac{7}{8}$-inch tire, and the 20-inch rear wheel a $\frac{3}{4}$-inch.

The hub, cranks and spokes are same as are used in Light Champion.

The saddle is the Wonder, as used on the Light Champion, but either the Cobblestone or the Lillibridge will be furnished when desired.

The hollow one-piece handle-bar is of the ram's-horn type, but the cow-horn with spade handles or ordinary straight bar can be had without additional charge if preferred.

The backbone is $1\frac{1}{4}$ inches diameter, of the *choicest imported* weldless steel tubing, properly tapered and brazed to the rear fork and neck.

The front forks are made of the same tubing, rolled to an elliptical section, tapered and brazed to the head and fork ends.

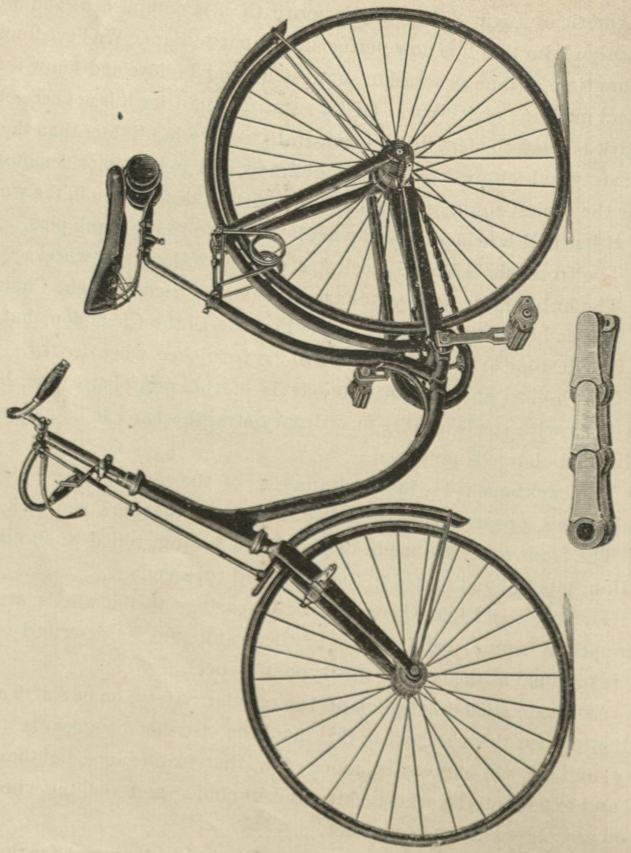
The regular Light Champion ball bearings to the wheels are used. Our special form of ball bearings to the crank pins, as described on page 20, is retained as the best for this type of wheel.

As the detailed description of the regular Safety, on pages 19 and 20, will apply for the most part to this machine, further comment is unnecessary, and we will only say in conclusion, that in elegance, lightness, careful and experienced workmanship, and in choice material, the wheel is as good as it is possible to construct.

The standard finish of the Light Safety is black enamel for the forks, backbone, rims and part of the spokes; all other parts, including the hubs and ends of the spokes near them, are nickel-plated. A tool bag, with oil can and full set of forged and accurately milled wrenches, accompanies each machine, and every part is interchangeable.

THE AMERICAN RAMBLER.

The Lightest, Most Original and Easiest-Running Rear-Driving Safety Yet Produced.



Drop Forged Steel Chain.

Price, Standard Finish,	$130 00
" All Nickeled, except wheels,	145 00
" Full "	150 00

If desired with nickel spokes in the standard finish or half-nickeled machines, additional, $2.00.

If desired with Perfect-Fit handles (see page 38), extra, $2 50.

DESCRIPTION.

The American Rambler for 1889 is designed and adapted for the use of either ladies or gentlemen. The necessary modification of the main frame furnishes a slight but advantageous degree of elasticity to the forward wheel, and admits of greater capacity for carrying a package when required.

This Safety bicycle is further improved over last year's pattern in its drop forged steel driving chain, which we claim is unequaled in its strength and freedom from rattle. It is still further improved in having superior cranks of a new design, and a more yielding spring, which also permits the seat to be lowered so that riders of a 46 inch ordinary bicycle can easily reach the pedals from the saddle.

All the features that made the 1888 machine superior in its ease of riding, running and steering are retained. Ball bearings are used in the head, crank, axle, pedals and wheels. The smaller front wheel is used from a belief in the soundness of the mechanical principles involved, and against objections based mainly on traditions, but a heavier tire is employed to better absorb the vibrations caused by uneven roads.

The wheels run on our Smith patent bearing; the crank and head bearings are of our own special patent. The latter, combined with their perfect angular alignment, being the cause of the Rambler's established repute as an easy steerer. The handle bar is of the popular ram's-horn pattern. The saddle is well adapted for ease of riding, and, as well as the handle bar, is adjustable in height to suit almost every rider's requirements.

Ample guards are provided to protect the dress from mud, or from contact with the wheels or chain. A very elastic spring, connecting the upper end of the rear fork with the main frame, while its lower end is hinged thereto, absorbs nearly all of the vibration made by the rear wheel, and prevents the rider being constantly lifted and lowered by every obstacle encountered.

The driving or rear wheel is 30 inches, and the front wheel, as it carries very little of the rider's weight, is four inches less in diameter. Both have ⅞ inch best quality red Para rubber tires.

The spokes are doubly butt-ended, and screwed direct to the hub.

The driving wheel is geared usually to 54 inch, but either 48 or 60 inch gearing will be substituted when ordered.

The cranks have 5½ to 6½ inch throw; the ball pedals are of more ample width than is usually provided, and have a corrugated surface, forming a treble grip for the foot.

A lamp fastening device, and a neat tool bag containing wrenches, oil can, etc., are supplied with each machine. The finish is our regular standard unless otherwise specified.

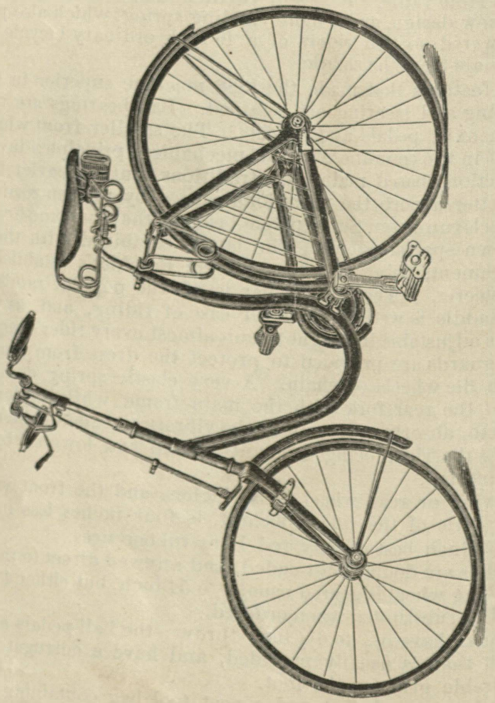
The material used in the Rambler is of the choicest obtainable, and with its many improvements over all competing wheels, we believe and assert that it is by all odds the highest grade, and most scientifically constructed rear driver to be had.

NOTE.—When this wheel is ordered especially for a lady's use we furnish 1-8 inch smaller tires, and extra guards, besides lightening the machine generally, at same list price, but when extra guards are ordered for the regular machine add $2.50 if enameled, and $3.00 if nickeled.

THE AMERICAN IDEAL RAMBLER

A High Grade Rear Driver for Boys, Girls and Ladies

Weighing not over 125 Pounds.



Price, Standard Finish,	$65 00
" All Nickeled, except Wheels,	80 00
" Full Nickeled,	85 00
If desired with Ball bearings to Crank Axle, extra,	8 00
" " " " to Pedals, "	5 00
" " " " to Head,	5 00
" with Nickel Spokes, extra,	2 00
" with new forged chain (see cut page 24), extra,	4 00

DESCRIPTION.

The American Ideal Rambler is a duplicate of the larger Rambler, reduced in size and weight. It retains all the valuable features of the latter, including the ball bearings at the head and cranks when specially ordered, for which see price list. It is well provided with means for protecting the rider's clothing, having ample mud guards to the front and rear wheel, a substantial guard over the chain and chain wheel, the forward part of the driving wheel also being protected by suitable guards.

The front fork turns in hardened cone bearings, having a long space between them to insure rigidity in position with freedom of movement for turning, the inclination and direction of the fork being made at the exact angle required to reduce the tendency rear driving wheels have of deviating from the course desired.

The rear fork hinged to the forward frame is made of semi-hollow pattern in sheet steel, and with the rear brace forms one piece of suitable strength and very light in weight.

The forward or main frame is of seamless steel tube in one piece from the steering head to the seat stem. The latter is adjustable in height, and suitable for a rider requiring any bicycle of the ordinary pattern from 48 in. to 34 in. in diameter. The handle bar is similarly adjustable in height. The gearing is arranged to make one revolution of the pedal crank while the rider moves the same distance as a revolution would propel him on a 42¼ in., 45½ and 48½ in. ordinary bicycle.

Unless otherwise ordered machines will be sent with 45½ in. gearing.

The cranks are adjustable from 4 to 5½ in., and are detachable.

The driving wheel is 26 in. diameter, with ¾ in. tire. The steering wheel 22 in. diameter, with ¾ in. tire. Both have strong doubly butted direct spokes, easily replaceable when broken, and both are fitted with our Smith patent ball bearings.

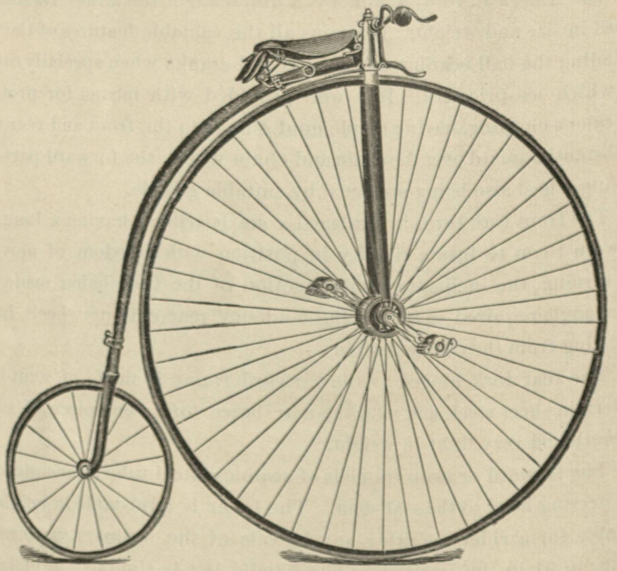
All parts are nickeled excepting the wheels and frame, which portions are enameled.

The Ideal Rambler is admirably adapted for the use of ladies weighing less than 125 pounds, and will, no doubt, find many purchasers among that class of riders, as well as from boys and girls.

THE AMERICAN IDEAL BICYCLE.

(EIGHTH YEAR.)

WITH LATEST IMPROVEMENTS.



PRICE LIST.

Diameter of Front Wheel.	Length of Leg Inside Measure to Sole of Foot.	Price, Standard Finish per Specification.	Price, all Parts Nickeled Except Wheels.	Price, Full Nickeled including Wheels.	Weight.
30 inches.	22 inches.	$20 00	$24 00	$28 00	22 lbs.
34 "	24 "	25 00	29 00	33 00	26 "
38 "	27 "	30 00	34 00	38 00	29 "
42 "	29 "	35 00	39 00	43 00	32 "
44 "	30 "	40 00	44 00	48 00	35½ "
46 "	31 "	45 00	49 00	53 00	37 "
48 "	32 "	50 00	54 00	58 00	42 "
50 "	33 "	55 00	59 00	63 00	43½ "

Ball bearings to front wheel,	$7 00
" " rear "	4 00
" " pedals,	5 00
If nickeled spokes are required in the standard or half-nickeled bicycles, add to the price	2 00
If with ram's-horn bar or spade handles, extra,	1 00

For Parts, Telegraph Code, etc., see Special Catalogue, which is mailed on receipt of 1-cent stamp.

DESCRIPTION.

This is the eighth season for this excellent machine, which is designed SOLELY for the use of boys and youths. Its large sales in the past, and the favor it has generally met with, stamps it as the best boys' and youths' bicycle ever made in this or any other country.

It is much improved over former seasons, and made in sizes from 30 to 50 inches, having a closed head provided with dust-shield, long neck, detachable handle-bar, butt-ended spokes and adjustable steps, in all sizes. All of the wearing parts are of steel, and hardened. It is built interchangeable, with some parts of greater strength than those of previous seasons, this being accomplished by distributing the material to better advantage, and without adding to the weight.

The front wheels of the 48 and 50 inch bicycles have ⅞-inch fine Para rubber tires; the rear wheels have ¾-inch by 16 inch diameter. The 46 and 44 inch have ¾-inch tires to front wheels, ⅝-inch to the rear, by 16 inch diameter. The 42 and 38 inch have ¾-inch to front wheel, ⅝-inch to the rear, by 14 inch diameter. The 34 and 30 inch have ¾-inch to front wheel, ⅝-inch to the rear, by 12 inch diameter.

The rims are of semi-hollow shaped steel of well tested quality and pattern, with which we have had complete success. The spokes are made of the best grade No. 12 steel wire, enlarged at both ends, which we test to bear a weight of 770 lbs. each, and are screwed directly into the hubs.

The hubs are made of gun metal, and secured to the axle with a long taper fitting, thus removing the possibility of their ever turning or working loose. The axles are of fine forged steel, quite as small as the average axle, but made much stronger by dispensing with the shoulder that is invariably formed on the shaft at the base of the crank.

The same may be said of our cranks, the material being distributed in such a way as to secure the greatest strength without the use of superfluous metal. The forks and backbone are of a tough quality of iron. The latter is of welded and tapered tubing, firmly joined to the neck and rear fork. The step is adjustable for height or angle, with a rubber inset, which insures a firm, easy support, and removes the liability of slipping.

The saddle is our well-known Cobblestone, made especially for this wheel, and of a size properly proportioned to the various sizes of riders.

The handles are rubber, of good form to furnish a comfortable hold, as shown in cut on page 45, and are made of solid rubber. They do not break in falling, and prevent jar to the machine, acting as a cushion in case of an accident. The handle-bar and brake-levers are of our well-known cow-horn pattern. It gives plenty of room for the limbs when used by a tall rider.

It is in one piece throughout its length, and has no weak points whatever, none having ever been known to break by use or accident. It is detachable, being fastened by our patent clamping process.

We will supply either dropped or straight bars without extra charge.

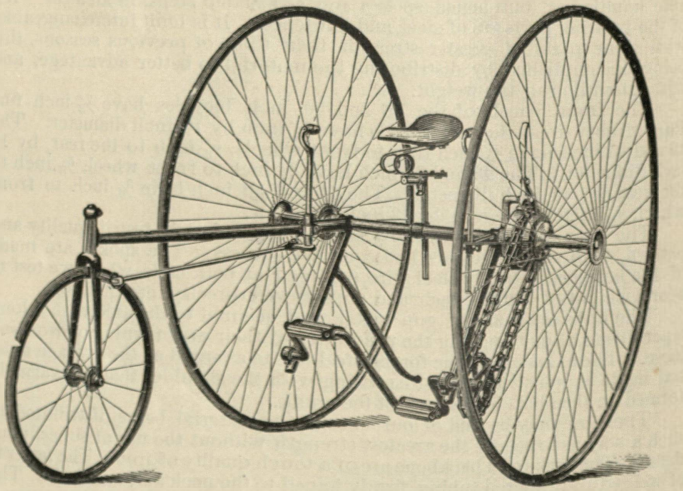
The bearings are parallel and fitted with our patent globular sleeve, as in the "Challenge," which accommodates itself to the varying strains in the forks, and is dust-proof.

The pedals are of white square corrugated rubber, having square holes in their centers, fitted on square rods, which prevent their turning and consequent slipping of the foot, and properly proportioned to suit each size of machine. It is finished in black, with real gold stripes.

Each bicycle is provided with a tool-bag containing a suitable wrench and oil can.

THE IDEAL TRICYCLE.

(FOURTH YEAR.)



(TWO TRACK.)

Diameter of Drivers.	Diameter of Steerer.	Price, Standard Finish.	Price, Full Nickeled.	Weight.
30 inches.	14 inches.	$35 00	$50 00	47 lbs.
34 "	16 "	40 00	55 00	51 "

Ball bearings to driving wheels, extra, - - - - - -	$10 00
" " " steering wheel, " - - - - - - -	4 00
" " " cranks, " - - - - - -	5 00

DESCRIPTION.

This really beautiful little machine has received every care, and is listed now for its fourth season with a well-earned reputation of being just what we claimed for it when we introduced it to the cycling public, and of a quality both in material and manufacture that will compare very favorably with larger and costlier machines. It is as a tricycle what its brother, the Ideal bicycle is, and as such was bound to *at once* attain to the same position in the popular regard.

It is an open-fronted machine, and has all the advantages of front steering and double driving, and as in two tracks fewer obstacles are met with than in three, its advantage over other patterns in this regard is evident.

The steering is made perfect by the employment of an improved form of balance, or double driving gear, which transmits the power to each driving wheel; but admits of their revolving independently of each other when necessary, as in turning curves.

The handles and seat are adjustable for height, and the latter, also, for position above the crank.

A strong hand-brake is provided in a convenient place near the hand of the rider.

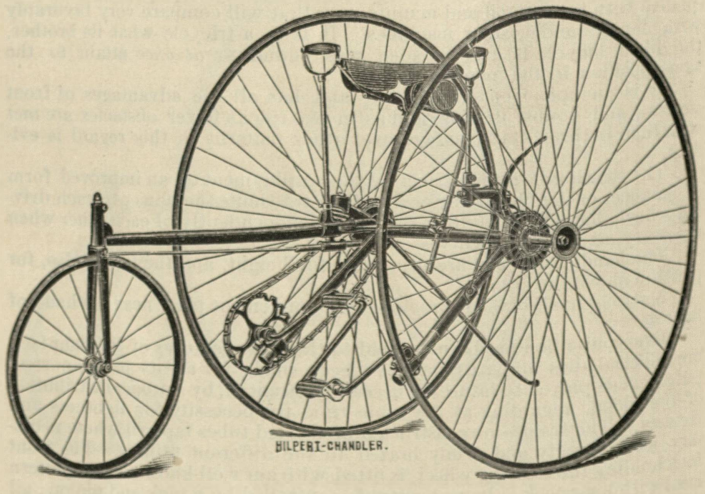
Every attention has been devoted to the other features of its manufacture; special dies and patterns have been made for all its parts; correct judgment displayed to insure the necessary strength, by a proper distribution of the metal, regarding at the same time the necessity for lightness and rigidity. The frames are constructed of welded tubes tapered where necessary, and strongly and firmly brazed to the different fittings. The front fork holding the steering wheel, is fitted with our well-known closed pattern head with long neck. Its movement is controlled by a rack and pinion; all steel shafts are used, carefully fitted. Steel double butt-ended spokes are used in the hubs and rims; the latter are of semi-hollow shaped steel. Tires of the best Para rubber, ¾ inch to driving wheel, ⅝ to steering wheel. The cranks are fitted with attachments to take up the slack in chain, which passes over a sprocket-wheel on the main shaft, and is fitted with a dress-shield to prevent the dress from being injured. The seat is of the ordinary saddle pattern, and has a back support or frame. This is set on a spring attached to the sliding rod, and the latter is fitted to the main frame so as to be adjustable in height. We find, after considerable experience, that this style of saddle is better adapted to riders of either sex than the ordinary, or padded cushion seat, and is advocated by all the prominent writers on wheeling subjects. The extreme width, outside to outside, of driving wheel is 27 inches, which admits of its easy entrance to the average house doors. The standard finish tricycle has a jet black color ground, relieved with gold leaf striping and nickel-plated trimmings, being similar in finish to our well-known Ideal bicycle.

Each machine is provided with a tool-bag containing a suitable oil can and wrench.

This machine is made exclusively for youths and young misses, and is not large enough or strong enough for adults.

THE AMERICAN CHALLENGE TRICYCLE.

A High Grade Three-Wheeler at a Moderate Price, with Ball Bearings to the Three Wheels and Cranks.



(TWO TRACK.)

Diameter of Drivers.	Diameter of Steerer.	Price, Standard Finish.	Price, Full Nickeled.	Weight.
42 inches.	20 inches.	$115 00	$135 00	75 lbs.

DESCRIPTION.

Perhaps no subject incident to the manufacture of Cycles has received more attention, or about which opinions are more varied, than that of the proper model for a tricycle. Some American manufacturers, whose patronage is confined to the few favored sections of this country having hard and smooth roads, claim that the bicycle steering machine is the only meritorious form, and they will make no other. But we have considered the question very carefully, and have come to the conclusion that the two track open front model is a more practical type, for the following reasons: The two track can be used upon the ordinary country roadway, where two-horse vehicles are used almost exclusively, forming two deep wheel ruts with a ridge between, whereas the other form on such a road is almost useless. As our patronage is only limited by the confines of the entire country, we are bound to respect this fact. Another very cogent reason is that the two track is steered more easily on narrow paths, crossings of streets or sidewalks, and easier handled by ladies, for it has no front handle-bar to prevent rapid dismounting if necessary or to prevent the seat being easily reached. These points are so apparent to lady purchasers that in nine cases out of ten, where a choice is given, the two track is selected. All our tricycles therefore are patterned after this model.

In matter of detail the Challenge tricycle follows so closely the lines of the Ideal tricycle that a long and minute description is hardly necessary. It is made, however, for the use of adults and heavy riders, and is correspondingly larger and strengthened. The tubing is of the best, and the various parts, joints and connections are after the most modern and approved ideas, and in them nothing but the choicest of selected material is used. Its extreme width is 35 inches, and it easily passes through any ordinary door. The two drivers have ⅞ inch rims and the steerer ¾ inch. It is provided with the same differential gear used in the Ideal.

Choice of either 48 or 60-inch gear is given, at the option of the purchaser, but unless stipulated the 54 is used.

It has ball bearings to the driving wheels, steering wheel and cranks.

The hammock saddle is made of the best quality of black leather, and experience has proved its desirableness.

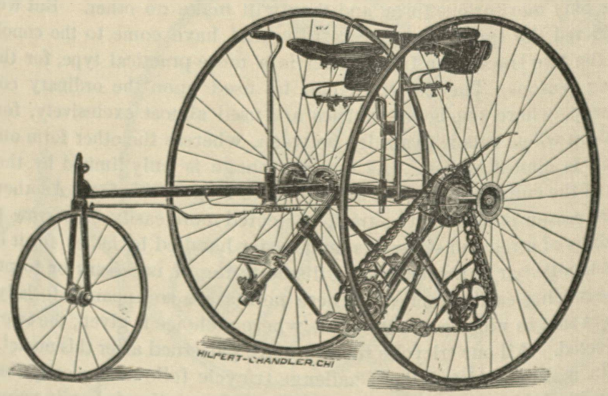
The standard finish is the usual black enamel with nickel trimmings.

Each tricycle is provided with a nickel-plated oil can and a suitable wrench contained in a neatly finished and improved tool-bag.

Altogether, the Challenge Tricycle is a first-class machine in every way; it never fails to give satisfaction, and is considered far ahead of any three-wheeler yet produced.

THE AMERICAN IDEAL TANDEM.

The Only Youths' and Misses' Tandem Manufactured.



(TWO TRACK.)

Diameter of Drivers.	Diameter of Steerer.	Price, Standard Finish.	Price, Full Nickeled.	Weight.
30 inches.	14 inches.	$65 00	$85 00	64 lbs.
34 "	16 "	70 00	90 00	68 "

If desired with ball bearings to drivers, extra	$10 00
If " " " " " steering wheel, extra	4 00
If " " " " " cranks, extra	10 00

DESCRIPTION.

The American Ideal Tandem is designed with the same general features that make the single machine so popular. The two-track front-driving system is preserved. The position of the seat and some other parts are changed, and extensions are formed at the rear of the driving axle on which the rear cranks are mounted. The weight of both riders is largely over the driving wheels, and their position nearly vertical. The dimensions are reduced as much as they can be with safety, that the machine may be compact to go through narrow entrances, and the weight also reduced with care and judgment to retain the necessary strength.

The frame is made of welded tubing, brazed to suitable corner fittings, through one of which the main axle runs, turning in either ball or parallel bearings at its ends.

The axle is provided with a case, concealing the differential or balance gear, by which the power of the chain is transmitted to both driving wheels, while allowing them to change their relative movements when turning, so that neither is compelled to slip, which must result when such gearing is not used. The rubber tired wheels are of great strength, having hubs of more than ordinary width to sustain better the strains such machines are subject to. The drivers have six-eighths inch and the steerer a five-eighths inch rim.

The steering is done by the handles at each side near the seat. Both are adjustable for height. That on the right is connected by a rack and pinion with the steering wheel, and at the left the brake lever is fitted so as to be near the hand of the forward rider.

The chain, chain wheel and rack have proper guards to protect the dress from injury.

Both seats are adjustable, and the forward one is provided with a back rail, as shown in cut.

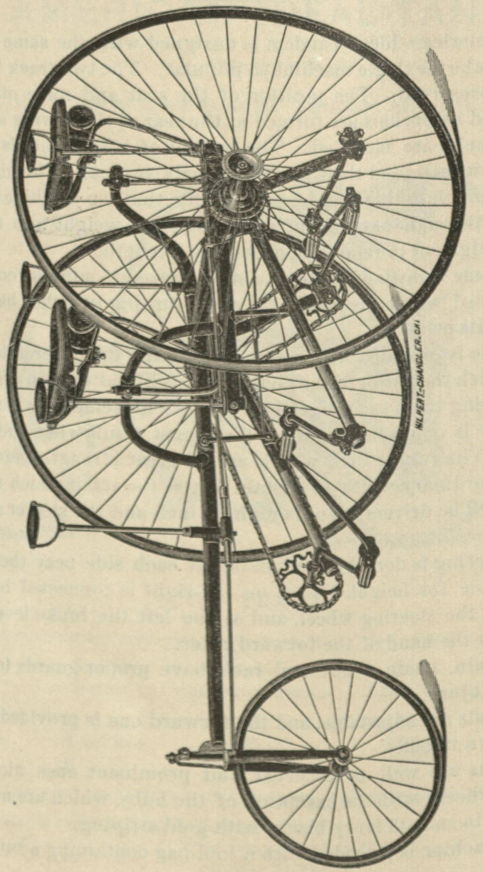
All parts are well constructed, and prominent ones nickeled. The frame and wheels, with the exception of the hubs, which are nickel plated, are finished in smooth ivory black, with gold striping.

Each machine is provided with a tool-bag containing a suitable oil can and wrench.

We have sold a great many of these unique little machines. Parents have found them to be perfectly safe, and the seats, on account of their adjustability to height, admit of quite an allowance for the growth of the child, an important feature from an economical standpoint. We heartily commend the Ideal Tandem to parents desiring to furnish their children with a safe and healthful means of exercise and pleasure.

THE AMERICAN CHALLENGE TANDEM.

With Ball Bearings to the three Wheels and Cranks.



Diameter of Drivers.	Diameter of Steerers.	Price, Standard Finish.	Price, Full Nickeled.	Weight.
42 inches.	20 inches.	$180 00	$210 00	114 lbs.

If desired with child's seat, extra..... $5 00

DESCRIPTION.

The Challenge Tandem occupies the same relation to the Challenge Tricycle as does the Ideal Tandem to the Tricycle of the same name, and it is only necessary to read the descriptions of these to get a clear understanding as to what the Challenge Tandem is. Mechanically it is very like the Ideal Tandem, excepting in the proportions which have been accommodated to the needs of heavy riders, and in the fact that nothing but the best of selected material is used in its construction.

The 42-inch drivers have an inch tire, while a ⅞-inch tire is used on the steering wheel.

The frame is made from imported and weldless steel tubing throughout, well secured without unnecessary parts or braces, and is made light wherever possible ; 38 inches is the extreme width, and 82 inches the length. The unusual length of the arm to which the steering wheel is attached gives increased steadiness to the steering and admits of the front seat being well removed from the rear one to give plenty of freedom to the rear rider. The forward seat is placed at the left of the center line and the rear one to the right, that a better outlook may be had by the rear rider. There being ample room, we have decided to add a child's cushioned seat between the others at an additional cost of $5. Either or both may do the steering and braking. Choice of either 48 or 60-inch gear is given at the option of the purchaser, but unless stipulated the 54 is used.

It has ball bearings to all the wheels, and to the cranks.

Saddles are the same as on the Challenge Tricycle.

The standard finish consists of black enamel with nickel trimmings.

Each machine is provided with a nickel-plated oil can and a suitable wrench, contained in a neatly finished and improved tool bag.

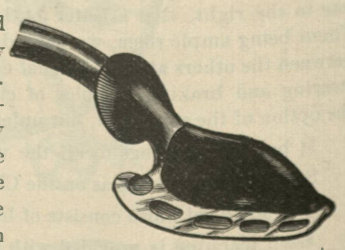
In no respect is it inferior to the highest-priced machines procurable, no matter what the price or claims to the contrary.

Although this Tandem was built primarily for use on all sorts of country roads, we have been gratified to see that it soon became a great favorite in cities containing splendid riding surfaces. In Chicago—and no city in the world, probably, has better roads—the Challenge Tandem has become the most popular machine of its type. For picnicking the father can take his wife and child with him and still have plenty of room to store away the lunch. It is a practical, safe and speedy wheel, which we can conscientiously guarantee, and which has to the present time occasioned not a single instance of dissatisfaction.

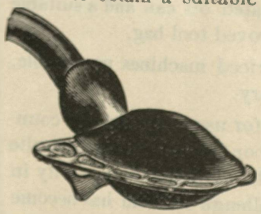
SUNDRIES.

We have organized a special department to handle sundries, and devote a great deal of space to it. In many instances we furnish our own manufacture, and on such articles our figures are bottom as a matter of course. All the sundries that we list that are not of our own manufacture we purchase in very large quantities, and have received and can give our customers the benefit of every possible discount. We therefore earnestly solicit the trade of all our agents, with the assurance that we are headquarters on everything we list.

THE PERFECT-FIT HANDLE.



Our latest design in handles called the PERFECT-FIT HANDLE, is used only by us, and on the rams-horn handle bar. Its advantages must be felt to be properly appreciated; an understanding may be obtained by noting the defects of the ordinary shape and how much the fingers must be cramped and pressure exerted to obtain a suitable hold when hill-climbing and encountering sandy roads. The same defects exist in a less degree on all occasions, to which the horny hand of every rider silently testifies, and when it is remembered that the hands must be on the handles almost the whole time, a proper study for the correct form for said handle is imperative.



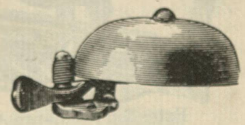
The result of such study is the production of a handle fitted to the hand when the fingers are slightly bent without exertion; it forms a grip for the thumb, the most powerful part of the hand, and a rest for the wrist. Altogether this handle is the perfection of comfort.

Price, in addition to either of the other handles, per pair, $2.50.
Price, per pair, alone, - - - - - - - 4.00.

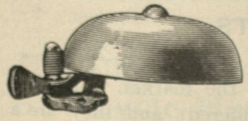
CYCLISTS' BELLS.

All our bells have been strengthened and improved, and we have prepared special machinery to produce them of fine quality and in large quantities, enabling us to furnish satisfactory quotations to the largest dealers.

No. 1. THE YOUTHS' BELL.



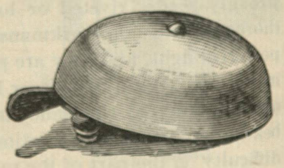
2¼ inches in diameter, with nickel gong and bronze fastenings. Price, 50 cents.



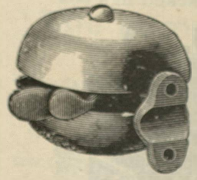
No. 2. THE FAVORITE.

2½ inches in diameter, with full nickel gong and fastenings. Price, 75 cents.

No. 3. THE STANDARD.



3½ inches in diameter, with nickel gong and fastenings. This is absolutely the loudest bicycle bell in use. Price, $1.00.

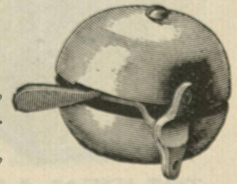


No. 4. THE CHIMING.

2½ inches in diameter, with nickel double bells and fastenings; sounds two distinct musical notes; does not rattle. This bell has been entirely remodeled. Price, $1.50

No. 5. THE SUPERB.

Highly Recommended.



The Superb has a continuous chiming sound, and is of superior finish. Full nickel. Price, $2.00.

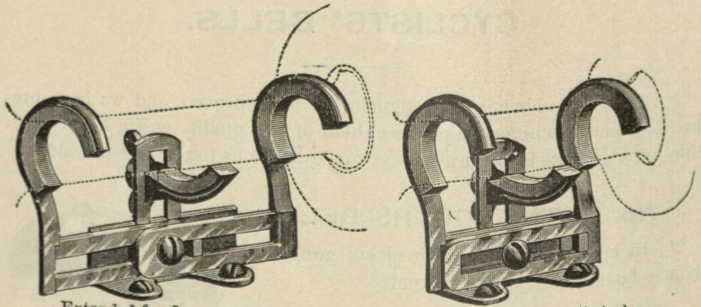
The above may be fastened to the brake-spoon, or handle-bar, as desired.

The gongs have square holes in their centers, fitting perfectly to square ends of the frames, and secured by well-proportioned screws. They cannot possibly be loosened without the aid of a screw-driver.

Each bell is put up in a neat paper box.

AMERICAN BICYCLE LAMPS.

Manufactured Expressly for Us and Fitted with Our Patent Axle Attachment.

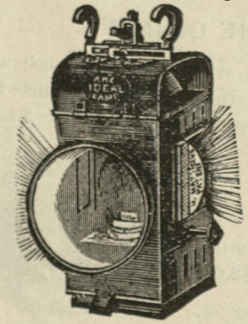


Extended for Large Axle — Closed for Small Axle.

AXLE ATTACHMENTS.

Price, each, - - - - - $ .75

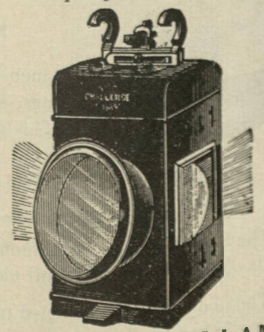
These lamps are unquestionably the best in the market. They are strongly made, riveted or locked (instead of soldered), and they are a thorough piece of workmanship. Being of large size they throw a very powerful light, and they are provided with red side lights. The improvements are: Wind up burner by which the light may be regulated from the outside, to avoid the annoyance of opening the lamp. Adjustable axle bearings or attachments, adjustable for length and diameter of axle without difficulty on the part of the purchaser. Each lamp is packed in a box.



THE IDEAL LAMP

will fit all sizes from 30 inch upwards, or any other make of boys' or youths' bicycle. See cut.

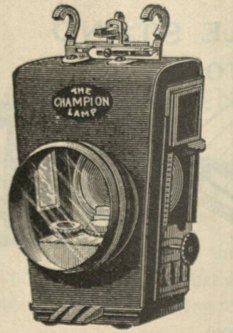
Price, japanned, - - - - $2 25
" nickeled, - - - - 3 00



THE CHALLENGE LAMP

fits any size except smaller sizes of "Ideal." See cut.

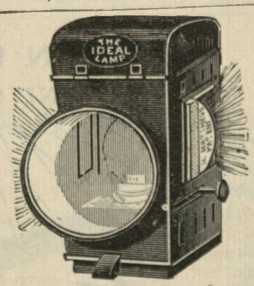
Price, japanned, - - - - $3 00
" nickled, - - - - 3 75



The Champion Lamp.

Fits any size over 50 inch. See cut.

Price, japanned $5 00
" nickeled 6 00



Ideal Tricycle Lamp.

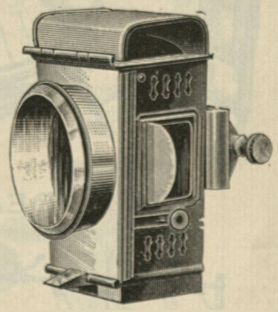
Useful also as a bicycle head lamp. See cut.

Price, japanned $2 25
" nickeled 3 00

The Challenge Tricycle or Bicycle Head Lamp.

Similar in shape and finish to the "Ideal," only larger and stronger, and fitted with an adjustable fastener.

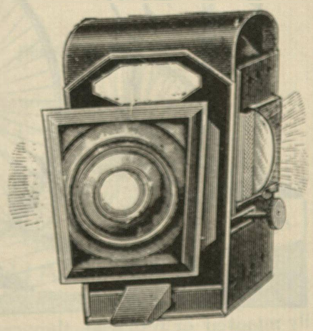
Price, japanned $4 00
" nickeled 5 00

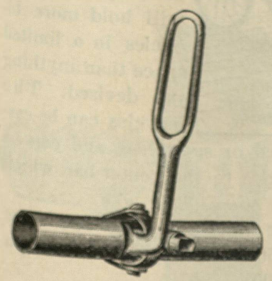


The Acme Tricycle Lamp.

Price, japanned. $4 00
" nickeled 5 00

When ordered for the Rambler, an attachment is furnished free, if needed.





Ideal Tricycle Lamp Supporter.

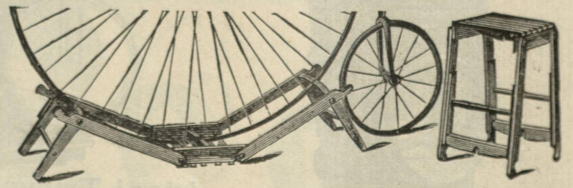
A convenient and practical device for attaching lamp to a tricycle.

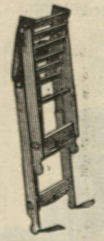
Price, nickel-plated, with band $0 75

DAYTON BICYCLE STAND
AND CAMP STOOL.

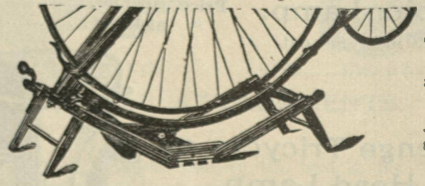
(PATENTED.)

Made of Ash. It is light, strong durable and cheap. Nicely finished and varnished.





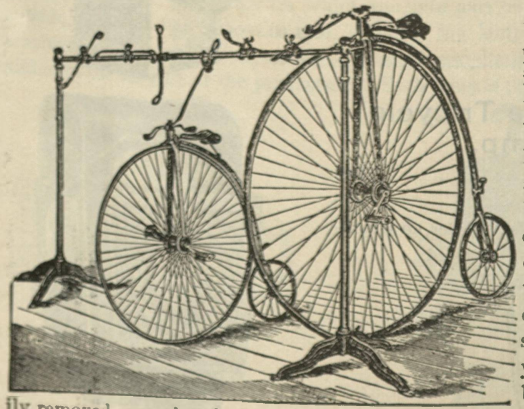
Can be used as a stand.
Can be converted into a camp stool.



Can be used for cleaning.
Can be folded into a small space.
Can be easily adjusted for different size bicycles.

Weight, 5½ lbs., Price, each, $1.50

THE IDEAL BICYCLE RACK



forms a very complete and convenient means for storing or exhibiting bicycles; it occupies little room, is neat and attractive, can be used either in the center or at the side of the rooms; and will hold more bicycles in a limited space than anything yet devised. The bicycles can be easily removed or replaced, they cannot be injured or scratched, and can be placed diagonally in the space or at right angles to the center-bar which supports them.

The uprights are painted and striped, the rods and screw-heads are nickel plated; they are made 10 feet long and 56 inches high, and hold ten bicycles of any size or make. Price each, $15.00.

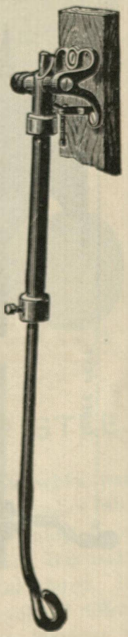
THE CHALLENGE WALL BRACKET.

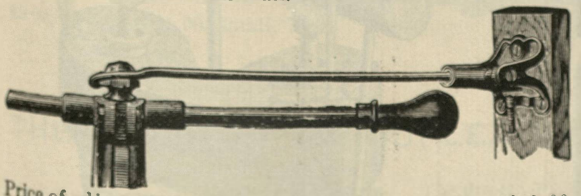
This device will hold one bicycle only, and must be fastened to a wall or post; it holds a bicycle of any size very securely at any angle to the support, and drops out of the way when not in use, as shown in the cut at side.

The loop at the end of the rod will fit over the center screw, and should be adjusted by means of the set-screw under its pivot to press downward strongly on the bicycle head.

The cut at the side shows the adjustable bracket when not in use, but capable of taking any size bicycle, either with the wheel turned to the wall, or the handle-bar in that direction.

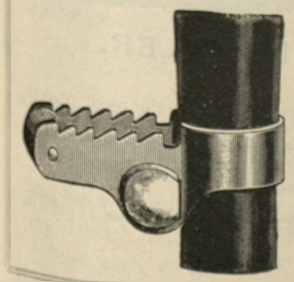
The cut below shows the bracket, not adjustable, except for height. This will take a bicycle of any size, but with the handle turned toward the wall.





Price of adjustable bracket, - - - per doz., $15 00
" not adjustable, - - - - " 12 00

Try these, and you will use no more stands. They are cheaper, hold more securely, and take less time to replace the wheels.

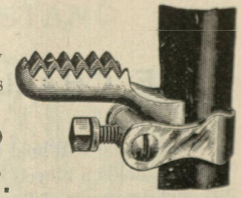


THE CHAMPION STEP.

Very light and neat in design. Is handsomely finished in full nickel.

Price, each, - - - $1 50

IDEAL BICYCLE STEP.

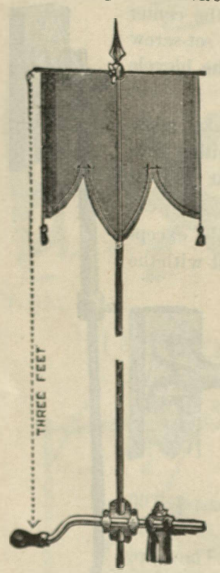


Very neat and adjustable. Consists of a saw tooth step, with a rubber inset, which prevents the foot from slipping.

Price, each, - - $1 00

FLAG-STAFF.

Arranged so that Flag can be put at any angle to the Staff.

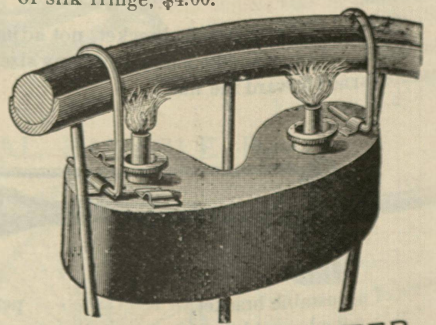


Used by the principal bicycle clubs of the United States.

For a "meet," parade, or drill, it makes a very pleasing effect in the line.

Flag-staff with clamp to fit any handle-bar, nickel plated, $4.00.

Price of silk flag, with appropriate lettering on both sides, and any color of silk, with gold or silk fringe, $4.00.



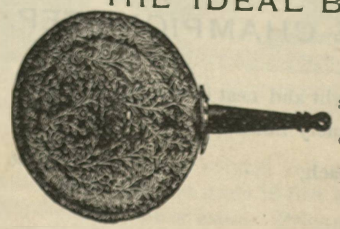
PERFECTION HEATER.

For Cementing Rubber Tires.

A practical and useful article for every Wheelman. Saves time, money and accident.

Price, each - - - - $1 00

THE IDEAL BICYCLE OILER.



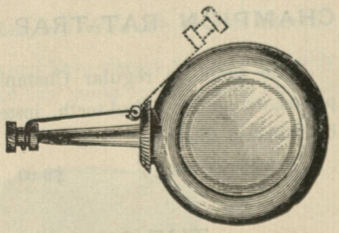
Can be carried in the vest pocket, and the patent screw-cap prevents the oil from escaping.

Price, nickel plated, on brass.....$0 20

THE PARADOX OILER.

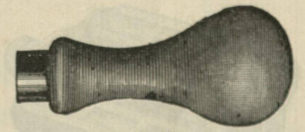
In this oiler, the stopper cannot get lost, and is very convenient to handle. It is one of those little things which become essential after its usefulness is understood, and which makes one wonder why it was not thought of sooner.

Price, nickeled.....$0 25

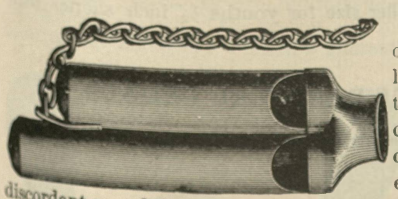


HANDLES.

Ebonite handles with large ball-shape ends, per pair, $1.50. Solid soft rubber handles, same pattern, large size, per pair, $2.00; medium, $1.00; small, 75c.



THE CALLIOPE OR DUPLEX WHISTLE.

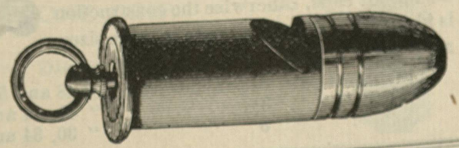


The duplex whistle, which was originally made for a police call, has been generally adopted as the bicycler's whistle. It is made of brass, and nickel plated. It consists of two barrels of different lengths, which produce a discordant sound that can be heard a long distance. Price, with chain, $0 25.

THE CALL WHISTLE.

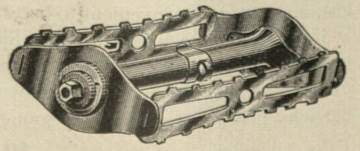
Very loud and shrill, and has a ring for attaching to watch chain.

Price, each, $0 25.



PEDALS.

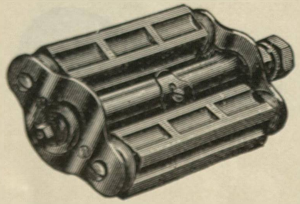
CHAMPION RAT-TRAP (BALL BEARING) PEDALS.



The same as regular Champion pedals, excepting chisel-teeth, instead of rubbers, are used.

Price, per pair, $9 00

THE CHAMPION BALL PEDALS.

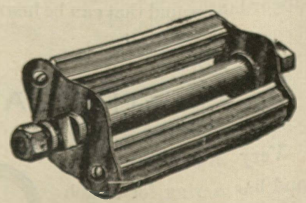


The shaft is of steel, accurately fitted, and the end plates are stamped out of rolled steel plates. The pin is square, and instead of being riveted at both ends, as is usually the case, it is fitted with a screw at one end so that the plate can be removed and the rubber replaced if worn. The steel balls at either end are contained in hardened steel cases; all joints are dust-proof. The pedal rubbers are white and corrugated, and of our patent quadrilateral pattern, which conforms to the shape of the foot in any position assumed by the pedal, and the foot does not tire with long riding. All parts are nickel plated. Price, per pair, $9 00 This pedal is also made in smaller size for youths ½ inch shorter than above. Price, per pair, $8 50.

THE CHALLENGE PARALLEL PEDALS

are precisely like the Champion pedals, excepting they have parallel instead of ball bearings. Price, per pair, $4 50.

THE IDEAL PARALLEL PEDALS



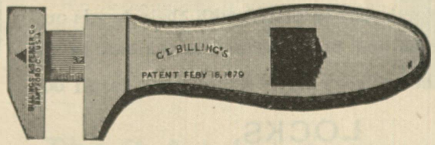
are similar in finish to the Challenge pedal, being smaller and lighter, but have steel dust-proof caps, otherwise the construction is identical. They are made in three sizes, as specified below:

Price per pair, 3½ inches wide, for 48 and 50 inch, - - $3 50
" " " 3¼ " " 42, 44 and 46 inch, - - 3 00
" " " 3 " " 30, 34 and 38 inch, - - 2 50

POCKET WRENCH.

B. & S. Manufacture--the best Bicycle Wrench in the World.

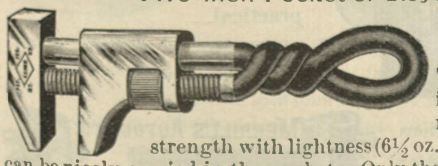
We have sold this wrench for years and have always found it perfectly reliable. We buy in larger quanties than any house in the trade, and our prices are the lowest.



	Opens.	Weight.	Price per doz. Black.	Price per doz. Nickeled.
4-inch Wrench, - -	1 inch	6½ oz.	$9 00	$10 00
5-inch Wrench, - -	1¼ inch	9½ oz.	10 00	12 00

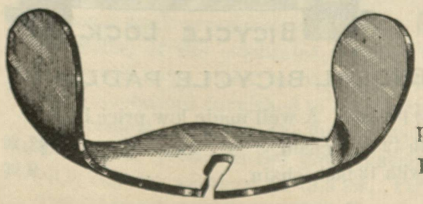
THE ACME WRENCH.

Five-inch Pocket or Bicycle Wrench.



Per doz.
Price, bright standard, $8 00
" nickeled, 9 60

This wrench has been greatly improved and can be highly recommended. It combines strength with lightness (6½ oz.), and on account of its shape can be nicely carried in the pocket. Only the best material is used in their construction, and every wrench is guaranteed.



TANGENT SPOKE GRIP.

For American Light Champion and other tangent wheels.

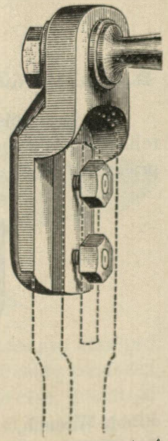
Price, - - - - - 35c

DIRECT SPOKE GRIP.

For Adjusting Direct Spokes.

Price, - - - - - - - - 60c.

THE CRANK EXTENSION,



illustrated herewith, furnishes a ready means of obtaining an extra long crank without the trouble of removing and re-securing a new one. Its construction consists of a single piece with two screws for attachment to the slot on original crank.

The screws should be placed with their heads outside of the crank and pedal, secured in the slot in the extension in the ordinary way. Price, per pair, $1 00

LOCKS.

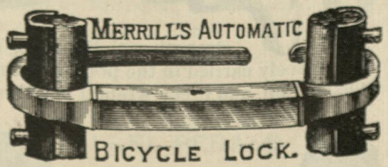
THE AMERICAN BICYCLE LOCK.

We believe it is the neatest thing of the kind for the purpose. Perfectly simple and practical.

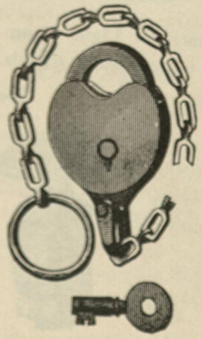
Price, - - - $1 00

A very handy and ingenious device for locking a bicycle or tricycle.

Price, - - - $1 00



THE IDEAL BICYCLE PADLOCK.



As per cut. A well-made low price lock.

Gilt with 12-inch chain, - - per doz. $7 20
Nickel with 12-inch chain, - - " 9 00

THE YALE LOCKS

are so well-known as to need no detailed description; they are made of bronze throughout and are practically indestructible.

Price, bronze, - - - per doz. $15 00
Nickel plated, - - - " 18 00

The G. & J. Illuminating Oil.

The G. & J. compounded highly inflammable but non-explosive illuminating oil.

Realizing how hard it is for the consumer to procure a pure and safe illuminating oil, we have specially prepared this, which we put up in quart cans with a convenient spout. We recommend it to our customers as a first-class article.

Price, per can, - - - - 60c.

The G. & J. Lubricating Oil.

The G. & J. compounded lubricating oil is free from grit, and very lasting. It is put up in pint cans with a convenient spout.

Price, per can, - - - - - 50c.

We wish to impress upon the rider the importance of using nothing but first-class oils, as bad results are frequently attained from an inferior article, and then the fault is wrongfully laid to the machine or lamp. Both of our oils are compounded with great care, and their pure and lasting quality makes them well worth the price named.

Loudon's Gutta-Percha Tire Cement.

We have made arrangements by which we have the sole control, in the United States, of the celebrated Loudon's Tire Cement, and, as we constantly keep a large stock on hand, all orders will be promptly executed. Favorable quotations furnished to large consumers.

This cement is made of the finest gutta-percha, and manufactured with that care which produces the greatest amount of adhesive strength. It is put up in cakes weighing 1 lb. to 5 lbs. Per pound, $1.00.

Cement in cakes of 2 ozs. each, 20c.

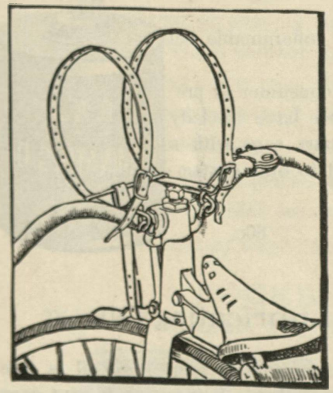
Loudon's Lion Cement.

For repairing cuts in rubber tires and other rubber goods. A very necessary article, which does the work. Price, per box, 35 cents each.

Loudon's Composition.

For filling holes in tires, per cake. - - $0 25

LAMSON'S LUGGAGE CARRIER.



The Detachable Form for Books or any other Bundle.

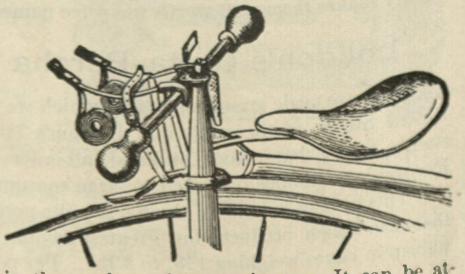
This carrier is made detachable, so that it may be removed from the bicycle without undoing the bundle. By simply unbuckling the strap which holds it down in front and unhooking it behind the bar, and then fastening the hook again it becomes a perfect shawl strap.

Students using the "Wheel" will find this arrangement invaluable in carrying their books to and from school. Made in two widths, 3½ and 4¾ inches between the arms.

Price, - - - - - - $1 00

LAMSON'S LUGGAGE CARRIER,

Or Bicycle Shawl Strap.



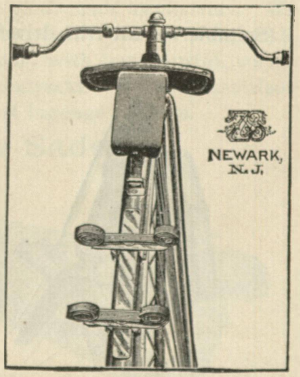
It is a simple and effective device for attaching a coat or any other bundle to the head and handle-bar of a bicycle, sustaining it in a position over and in front of the head, and out of the way in mounting.

It weighs but a trifle, and can be easily carried in the pocket when not in use. It can be attached to the bicycle in a moment, and removed as quickly, and when detached serves as a SHAWL-STRAP for carrying the bundle. By reading directions supplied it can be put on without trouble.

When in use on the bicycle it places the additional weight where it can best be carried without extra exertion by the rider. The carrier does not interfere with use of brake, or "coasting."

Price, - - - - - - - - - - - - - 75c.

THE Z. & S. LUGGAGE CARRIER.



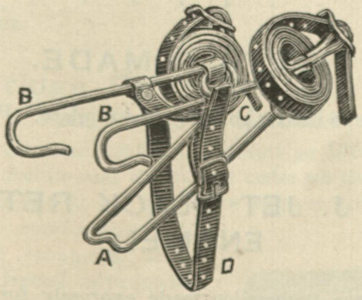
(Cut shows carrier open, ready to receive the parcel.)

This excellent carrier is placed behind the saddle, and is secured to the backbone by clamps in such a manner that it can not become loose. The package to be carried may be folded in size and shape to suit each individual rider, and with the addition of a piece of oiled silk or rubber cloth, the parcel can be made water-proof, and keep the articles free from dust or oil. When not used as a carrier it may be so folded that it is entirely out of the way, and is an ornament to any wheel.

It is nickel-plated, and will not rattle. In ordering give make of machine and diameter of backbone.

Price, - - - - - - - - - - - - $1 25

SMITH'S DETACHABLE LUGGAGE CARRIER.



(Patent applied for.)

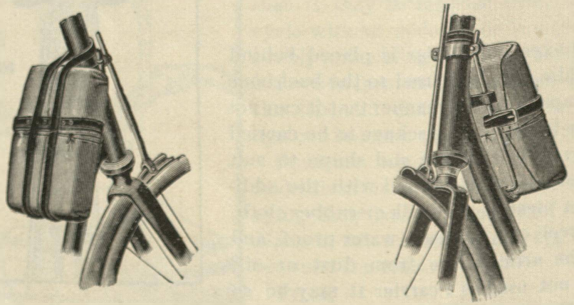
This Carrier is the latest thing of its kind. It weighs only 4 oz., and when folded together is 6 inches long, 2 inches square, and can be carried in telescope tool bag or in the pocket.

It will carry a dead weight of 10 pounds without sagging.

Every one who has seen it says that it is positively the BEST CARRIER on the market. Notwithstanding this Carrier costs more to make than most others, it will be mailed to any address on receipt of 75 cents.

THE RAMBLER LUGGAGE CARRIER,

(Suitable for all rear drivers, and fits the back bone of the ordinary bicycle.)



This consists of a strong steel wire frame, furnished with clamps securing it where wanted, and provided with strong leather straps and buckles for retaining a package, which can be very conveniently carried in full sight of the rider, when on the Rambler and on most of the rear-driven Safeties.

Price, - - - - - - - - - - - - - $1.50

PUTZ'S POMADE.

The best article in use for polishing nickel plate. Price, in tin boxes, 10 cents per box.

THE G. & J. JET BLACK RETOUCHING ENAMEL

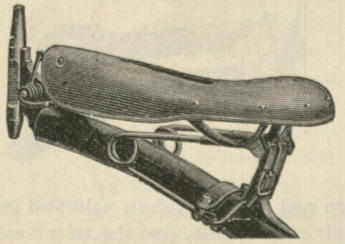
is a preparation made expressly for us for touching up machines. It dries almost instantly. It is put up in four-ounce bottles, each of which is supplied with a brush. There is enough liquid to re-enamel an entire machine if desired.

Price, per bottle, - - - - - - - 50c.
" mail, including postage and packing, 70c.

LEATHER SUNDRIES.

For several years we had all our leather goods made by contract. We found it impossible to get the same stock contracted for, and wishing nothing but the best of material to leave the factory with our imprint, we decided two years ago to discontinue all such contracts. We now manufacture everything in leather which we list except luggage carriers.

The Cobblestone Saddle.

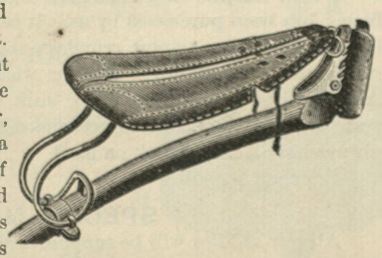


For the past three years we have spent a great deal of time in perfecting the construction of saddles, the result of which convinces us that the Cobblestone, furnished for the first time last season, is nearer perfection than any yet produced. It is made of specially prepared and selected leather. It is narrow in front, has a comfortable coasting-plate in the rear, and is adjustable. The spring at the rear is flexible, and the strap which connects the two parts of it (see cut) limits the upward throw, and to a great extent avoids the danger of headers. Its name was suggested from the fact that in experimenting on poorly and roughly paved streets we found it could be used over car tracks and cobble-stones easier than any saddle we have ever tried. In three sizes

Price, large, - - - - - - $6 00
" medium - - - - - - 4 50
" small, - - - - - - - 3 00

The Lillibridge Bifurcated and Universally Adjustable Saddle.

We manufacture and control the Lillibridge Bifurcated and Universally Adjustable Saddle and the patents under which it is manufactured. We believe this saddle is one of the few which embody all the principles necessary to the comfortable and perfectly flexible hammock seat. In matter of universal adjustment it leads all others, being adjustable in height in front, in height in rear, in width and in length. It has a bifurcated seat, the advantages of which are generally understood, and a comfortable coasting plate. It is adapted to all makes of machines and for the different Safeties. For the American Safety and the Star it



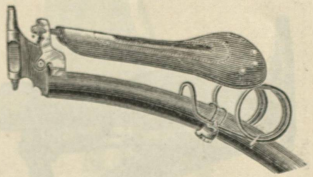
is made in special styles. The material used in its construction is of the best, and its style and finish have been greatly improved.

In two sizes: Price, large, $5.00; small, $3.00.

Adjustable in height, width, tension, and distance from the head. Is well made. Has a very elastic spring, and will fit the body perfectly.

State, in ordering, the kind of machine on which it is to be used.

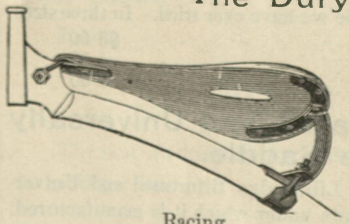
The Wonder Saddle,



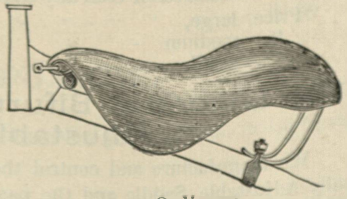
formerly manufactured and sold by McCoy & Williams, is one of our latest acquisitions, and has a great many friends. It is adjustable in front and rear, is very narrow in front, and made from the best material obtainable. Many racing-men and scorchers show a decided preference for this saddle. It is exceedingly comfortable, and the rider is enabled to get directly over his work. We do not hesitate guaranteeing it to be one of the most durable and comfortable saddles made. In one size only, but made of greater length than in former years. We also adapt this saddle to tricycles.

Price, for bicycle or tricycle, - - - $6 00

The Duryea Saddle.



Racing.



Ordinary.

Which was the first Hammock Bicycle Saddle patented in the United States, has been purchased by us. It sets very low on the backbone, and is a great favorite among scorchers and racing-men. It is made both for racing and road riding. Mention what kind is wanted when you order. Almost all of the old-time flyers insist that the Duryea is the only perfect seat for fast work, and to accommodate any who share in this belief, we always have a large stock on hand.

Price, - - - - - - - - - - - $4 00

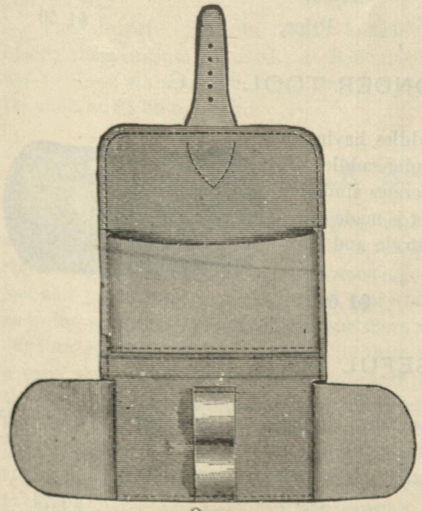
SPECIAL MENTION.

All our saddles will be supplied with clamps to fit 1½, 1⅜, 1¼ or oval backbones, but unless specially mentioned we furnish them to fit 1½ inch diameter, which is the size of the best American roadster backbone.

TOOL BAGS.

The hard usage to which the necessary cycling accessories are subjected, emphatically demands the use of nothing but choice and tough material. While our goods in this respect are perfect, we have also paid especial attention to the workmanship and finish, and we take pleasure in offering the following to the inspection of dealers, customers and manufacturers.

THE CHAMPION TOOL BAG



Open.

is formed after a model which we believe is peculiarly adapted to the Cyclers' use. It is made in the best manner, of the choicest material, finely finished throughout and lined with red morocco, and has leather-covered front buckle, which we have found more enduring than metal clasps.

Price, - - $1 50

Closed.

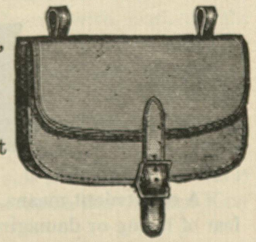
THE CHALLENGE TOOL BAG

is substantially the same as the Champion; is just as carefully made, but has no lining. The buckles are nickeled.

Price, - - - - - - - - - - $1 25

THE IDEAL TOOL BAG

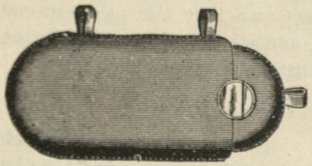
is made for use on the machine of that name, though it has become very popular among the riders of all makes of youths' machines. It is of the ordinary pouch shape and wears well. It is made in two qualities.



Price, No. 1, - - - $1 00

" No. 2, - - - - 75

THE TELESCOPIC TOOL BAG

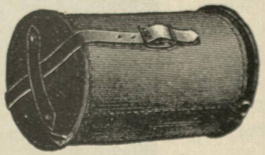


of pressed form, is made of superior leather, and finished with strong brass clasps, nickel plated. Our model differs somewhat from the old time Telescopic Bag, is more substantially made, and more durable than any before offered.

Price, $1 50

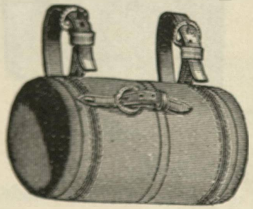
THE WONDER TOOL BAG

is particularly adapted to saddles having a round rear spring like the Wonder saddle. It is cylindrical in shape and operates similarly to the Telescopic. The Wonder is made of selected black leather, is hand made and carefully finished.



Price, - - - - $1 50

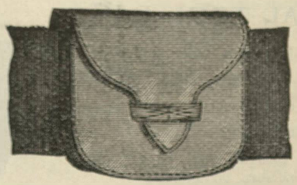
THE USEFUL TOOL BAG



operates similarly to the Telescopic, but is made for use on boys' saddles more particularly. It is made in two qualities.

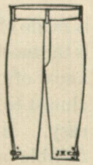
Price, No. 1, - - - $0 75
" No. 2, - - - 60

THE G. & J. BELT POUCH.



A convenient means of carrying a watch, wrench and money without fear of losing or damaging same. Price, 75c.

JERSEY CLOTH KNEE BREECHES.



Made from extra heavy quality worsted Jersey cloth. We would call special attention of bicycle riders to this style of knee breeches. Owing to the cloth being elastic they are made close-fitting, and give with every motion of the leg. They are very neat and the most durable article of the kind used. Color, navy blue and black. When ordering give waist measure. Price per pair, $4.00.

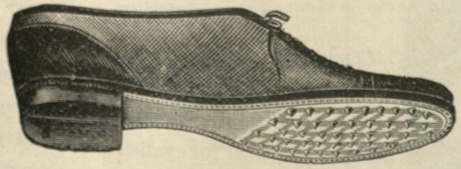
The Jersey cloth in these breeches is heavier and of a finer quality than ordinarily used. It is double fold, 54 inches extreme width, and to those who wish to have their own tailor do the work, we will sell the cloth at $3.50 per yard.

BICYCLE SHOES.

Our line of shoes are manufactured expressly for us after our own ideas as to what the perfect article should be, and can be obtained only of ourselves or our agents. We have devoted a good deal of attention to the subject and have carefully examined everything of the kind on the market, and do not hesitate to affirm that our shoes are more nearly perfect than any hitherto produced. In designing them we have endeavored to produce a good shoe at a low price. Last year we sold large quantities, and the fact that our customers, with no exception, expressed themselves as more than pleased, is pretty good evidence that we succeeded. We have never listed a cheap shoe, as we know durability and excellence cannot be attained at the expense of price. We invite examination, and are prepared to quote satisfactory discounts in quantities.

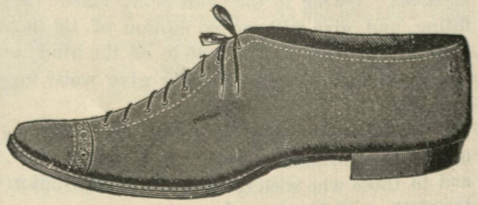
THE CHICAGO CANVAS SHOE

is made of the best quality blue canvas with wearing edges bound with leather. The sole is peculiar to this shoe, consisting of the very toughest quality of reddish rubber bound with leather at the edges, thus preventing the cutting and clipping of sharp stones and adding materially to the wearing qualities. This rubber sole is the only one that is practicable in rubber. Sizes and widths the same as in the Chicago Kangaroo Shoe. Price, per pair, $3.00.



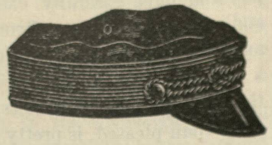
THE CHICAGO KANGAROO SHOE

is made of the best black Kangaroo leather, lined with canvas. The model is the most satisfactory we know of, and being laced almost to the toe it is very easy. It is exceedingly flexible and durable, and being of comely appearance can be worn constantly, whether while riding or not. It is made in sizes 5, 5½, 6, 6½, 7, 7½, 8, 8½, 9 and 10, and in widths C, D and E, C being the narrower. Price per pair, $4.50.



CLUB CAP.

This cap, the only one we list, is made after the most approved design and of the best material. The visor projecting down, shields the eyes from the sun. It is very light weight and a very desirable cyclist's cap. Color dark navy blue. When ordering give size. Price each, $1.75.



THE RELIABLE

Flannel Norfolk Blouse.

Made especially for us and after our own design.

Combining in one garment a bicycle shirt, house coat, walking coat, tourist jacket, lawn tennis blouse, etc.; a very desirable garment for cyclists. Color, navy blue. When ordering give breast measure.

Price, - - - $7 50

FLANNEL SHIRTS.

Patent Laced and Buttoned combined. Lace loops over buttons; does not have to be laced or unlaced when putting on or taking off. Buttons and Laces ADJUSTABLE, TO BE TAKEN OUT BEFORE LAUNDRYING. 1¼ inch. Facings stitched on each side of opening. Collar and Cuffs. Two Pockets—Handkerchief on left, watch or change on right side. Sleeves faced. Yoke. Shirt Double Stitched—stitching to match flannel. Buttons of flannel to match.

SIZES 14, 14½, 15, 15½, 16.

Price, each, gray	$2 00
" " blue	2 50
" " white	2 50

This Shirt is just as good in quality and careful manufacture as the shirt we sold formerly for $3.50, and it was only by purchasing an unusually large stock that we have been able to make the reduction. We have seldom received orders for other than the three standard colors above, and did not, therefore, deem it advisable to carry a larger variety.

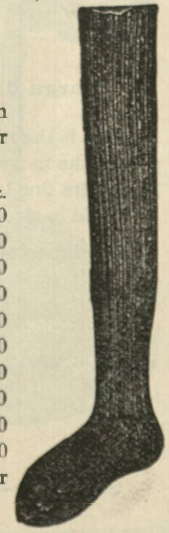
BICYCLE HOSE.

We have made arrangement with a prominent woolen manufacturer to supply a line of hose made expressly for Bicyclists. We furnish goods and colors as follows:

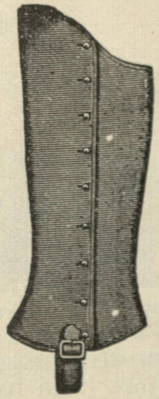
Sizes—9½, 10 and 10½.

		Per doz.
No. 1.	Wool, plain gray, navy blue and black	$ 6 00
" 2.	" " " " "	9 00
" 3.	" " L. A. W. color	9 00
" 4.	" narrow ribbed, L. A. W. color	12 00
" 5.	" wide " " "	12 00
" 6.	" narrow " navy blue and black	12 00
" 7.	" wide " " "	12 00
" 8.	Worsted, plain, " "	18 00
" 9.	" wide ribbed, " "	18 00
" 10.	" narrow " " "	18 00

When ordering state distinctly list, number, color and size.



CANVAS LINED
BICYCLE LEGGINGS.

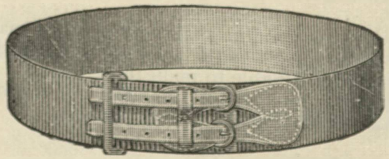


Button fastening, dark brown, does not show dirt; 17 inches high, side measure.

Made with black button fastenings.

Men's sizes, 6 to 10, price per pair, - -	$1 50
Boys' " 1 to 6, " " " - - -	1 25

BICYCLISTS' BELTS.



Large double Leather Straps and Loop, as per cut.

This is the most suitable belt for cyclists' use, as the straps and loops yield to the movement of the body; made with fine worsted or cotton webbing, extra fine trimming—colors as below.

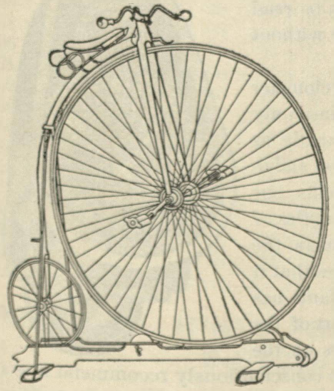
Made in sizes from 27 to 32 inches.

Solid color, red.	Solid color, navy blue.
" " black.	Blue center, two white stripes.
" " white.	Red " " " "
" " brown.	Solid color, blue.

Worsted webbing belts, - - - - - per doz.	$3 60
Cotton " " - - - - - "	3 00

Send one-cent stamp for our Special Catalogue of Parts.

EUREKA HOME TRAINER.



PATENT APPLIED FOR.

In placing the Eureka Home Trainer and Bicycle Stand before the public, we have endeavored to do so in a manner that will insure the best results to all interested in cycling, both from a pleasure and business standpoint.

First—By making a simple and effective machine that every rider, prospective rider and dealer will be pleased with, and actually needs.

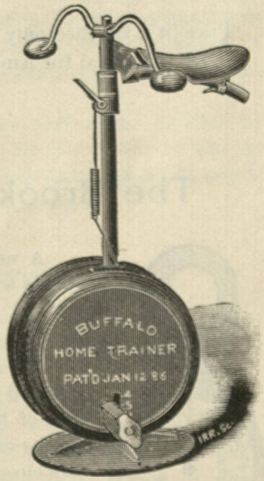
Second—By selling at a price that brings it within reach of all.

Third—By making it neat, compact, durable, convenient and adjustable.

Price, - - - - $7 50

This trainer is not a bicycle, but requires a bicycle to be operated.

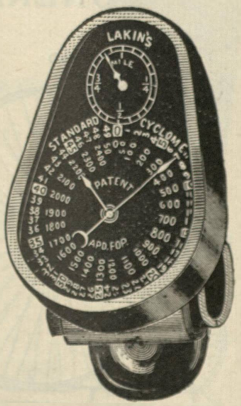
The Buffalo Home Trainer.



Originally designed for racing men to use indoors for training, and having been found useful in so many gymnasiums, it has been improved and strengthened for that purpose, and is now offered to the trade as one of the most useful additions to a gymnasium, not only for bicycle riders, but also for all who desire to develop the lungs and heart. Those who are not strong will find it safer and better than a running track, as the effect on the organs of respiration and circulation is the same, without the excessive effort incident to carrying the weight of the body.

Price, each, - - - $30 00

The Standard Cyclometer.

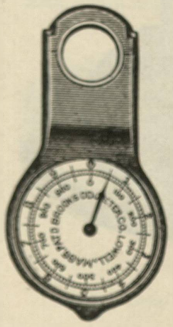


The action is positive and continuous, thus making it reliable in every respect. Can be read from the saddle and can be used with or without hub lantern.

We have thoroughly tested this Cyclometer for the past three years, and have attained only the best results. We find it to be exactly as represented by its manufacturers, whose elaborate description a lack of space prevents our publishing. It has been used on all varieties of American roads, and given our customers the best satisfaction, and in the few instances that it has been returned to us for repairs the fault has been either with hard usage on the part of the transportation companies or carelessness on the part of the user, so that altogether we can conscientiously recommend it as a first-class article, with a guaranty by its manufacturers that we are perfectly willing to sustain.

Price (it is finished only in full nickel), - - - - $10 00
" if wanted for American Rambler, - - - 11 00

The Brooks Ideal Cyclometer.



A neat little instrument which registers correctly and is sold at a moderate cost.

Directions.

To attach the instrument, remove the screws at the top and take off the cap. Place the collar upon the axle of the bicycle so that they will turn together, but taking care to bring the two parts of the collar together in a close joint. The dial faces toward the left.

Price, nickeled, - - - $5 00

Every instrument sent is fully warranted by the manufacturers.

Price List of Rubber Tires.

Size.	Price.	Size.	Price.	Size.	Price.
60 x 1.....	$7 25	56 x ⅞.....	$5 50	30 x ¾.....	$2 55
58 x 1.....	7 00	54 x ⅞.....	5 25	26 x ⅞.....	3 00
56 x 1.....	6 75	52 x ⅞.....	5 00	26 x ¾.....	2 50
54 x 1.....	6 50	50 x ⅞.....	4 75	22 x ¾.....	1 75
52 x 1.....	6 25	48 x ⅞.....	4 50	20 x ⅞.....	1 75
50 x 1.....	6 00	46 x ⅞.....	4 25	20 x ¾.....	1 60
48 x 1.....	5 75	42 x ⅞.....	4 00	17 x ⅞.....	1 60
46 x 1.....	5 50	30 x ⅞.....	3 50	18 x ¾.....	1 25
44 x 1.....	5 25	46 x ¾.....	3 15	17 x ¾.....	1 15
42 x 1.....	5 00	44 x ¾.....	3 00	16 x ¾.....	1 10
40 x 1.....	4 75	42 x ¾.....	2 85	16 x ⅝.....	85
60 x ⅞.....	6 00	38 x ¾.....	2 75	14 x ⅝.....	75
58 x ⅞.....	5 75	34 x ¾.....	2 65	12 x ⅝.....	60

PRACTICAL HINTS FOR DETERMINING SIZE OF BICYCLE REQUIRED.

Size of machine is an important and sometimes perplexing matter of choice. The correct size is a fit, and a fit is where a rider sits evenly, well in the middle of the saddle, with the ball of his foot on the pedal at its extreme distance, and with the ball slightly lower than the heel in that position. A larger reach than this is apt to cause fatigue and strain, and a shorter reach gives loss of effectiveness in thrust.

The table we give is for the average and for beginners. In deciding between two sizes of machines, we recommend the purchaser to take the smaller, especially for hilly or poor roads, as it will drive easier, be easy to mount, and afford less liability to fall in learning to ride.

DIRECTIONS FOR CEMENTING TIRES.

If your tire should become loose, it can be fixed readily by heating the rim, either by application of a gas flame, lamp or hot iron to the rim, causing the cement to melt and secure the rubber.

The rim and rubber should be first cleaned from dust and sand, and the rubber should be lifted out a little during the operation, to assure yourself that the cement is hot enough to unite with the rubber, and there is enough cement to fill the space in the rim when the rubber is pressed down. The wheel can be used again as soon as it is cold.

IN TOURING, it is well to provide yourself with some fine string to secure a loose place in the tire till it can be properly attended to.

PRACTICAL HINTS ON THE CARE OF THE BICYCLE.

Keep all parts well tightened, and the machine well oiled. Sperm is good; lard oil is fair; any oil that is good for a sewing machine will do for a bicycle. The Gormully & Jeffery Compounded Lubricating Oil we prepare especially for the purpose, and we believe it to be the best there is (see page 49). Do not keep it in a damp place, or the nickel work will be injured. Clean carefully after use, and keep it free from dust.

The parts of a bicycle requiring oil are the surfaces that move upon or against each other, and in all properly constructed machines of every kind some provision is made to admit and retain, with more or less success, the lubricating material.

Those parts in the ordinary bicycle needing oil are:

First, the axis of the rear wheel, which, being near the ground, is most exposed to dust, and turning three times as fast as the large wheel, should be oiled about three times as often. For this purpose a covered aperture will be found in the center of the steel part of the rear hub.

Next, the bearings of the front wheel are oiled through the pillar lubricators on each side of the front fork.

The plain pedals are best oiled by taking out the screw at the outer end and removing the pedal; the oil should be inserted in the pedal sleeve and on the pedal pin. The long fitting at the pedal centers, and their capacity for holding oil, make it unnecessary to oil it more than one-third as many times as the front wheel bearings. Ball pedals are provided with covered apertures between the rubber blocks, as the balls are liable to escape if the pedal is removed from its pin.

The other points require very little oiling; they are the neck at the top and bottom fitting, oiled through the hole in the top of the center screw.

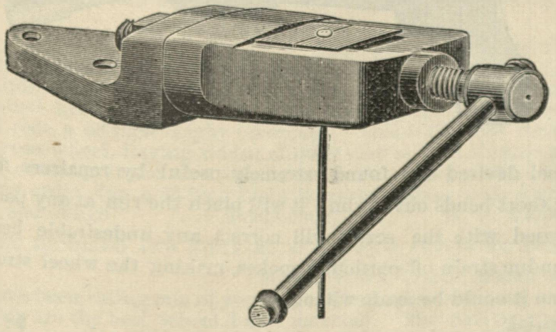
The spring clip also requires attention, a little being needed where the slipping occurs between the spring and clip.

Do not allow your friends to handle your spokes and snap them to test their tightness, as it is liable to strain them unnecessarily.

REPAIRERS' TOOLS.

In our capacity as manufacturers, we have found that certain tools could be used by wheelmen and agents to great advantage, to make certain repairs, and thus save expense of express or freight charges and loss of time in sending wheel to factory. We direct the reader's attention to the following tools and implements which can not properly be dispensed with.

SPOKE HEADER.



Spoke vise and die used in heading spokes, useful for all kinds, and arranged to turn angularly, to accommodate wheels like the Std. Columbia and some English machines in which the spokes are headed after they are inserted in the wheel. Each vise is provided with dies that will hold four sizes of spokes.

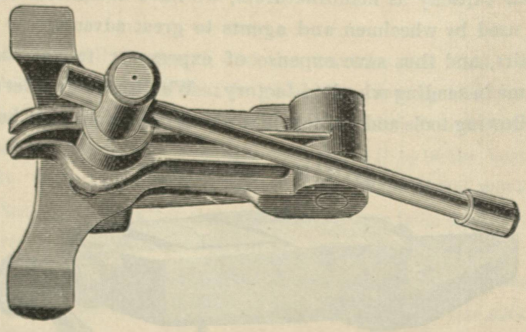
Price, - - - - - - $12 00

HANDY STRAIGHTENER.

The above cut shows a tool devised and found useful for straightening forks, cranks, or handle-bars. It is of great value to repairers and touring parties, and should be owned by every club in the United States. It is made of steel throughout, and polished. Try one and you will be surprised at its simplicity and effectiveness.

Price, - - - - - - - $2 00

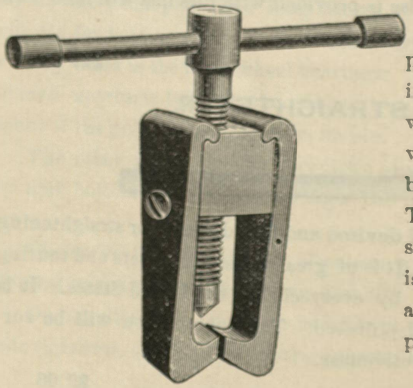
RIM CLAMP.



A tool devised and found extremely useful by repairers for taking kinks or short bends out of rims; it will pinch the rim at any part, and by being closed with the screw will correct any undesirable bends, thus taking undue strain off particular spokes, making the wheel stronger and truer than it could be made without it.

Price, - - - - - - - $8 00

CRANK REMOVER.



Long used in our repair department to remove cranks of imported and other bicycles which have a key driven endways into a groove, or key way, between the crank and the axle. The hooked claws grip the under side of the crank while the screw is forced against the end of the axle. This is indispensable in all properly equipped repair shops.

Price, - - $6 00

TESTIMONIALS.

The American Champion, Light Champion and Safety are so well and favorably known to the public generally that we publish but a few of the many hundred laudatory letters we have received regarding their sterling qualities, preferring to devote most of our space to the more recent comer, the American Rambler.

THE AMERICAN CHAMPION AND LIGHT CHAMPION.

CROCKER BREAKS THE SIX DAY RECORD—"MOST EASY-RUNNING WHEEL I EVER RODE."

PHILADELPHIA, March 12, 1888.

In the recent six-day bicycle race, four hours per night, at Elite Rink, Philadelphia, March 5th to 10th, in which I broke the world's record for the allotted time, making 405¾ miles, beating the previous record 5¾ miles, I rode a 53-inch Light Champion. This is the first mount I ever had on your wheel, having ridden all other makes, both English and American. I consider it the most stanch and easy-running wheel I ever rode. Place my order for a 53-inch Light Roadster among your first to be delivered, and oblige Yours truly, H. G. CROCKER.

ELEVEN HUNDRED AND FIFTY MILES WITHOUT ADJUSTING THE HEAD.

MONTE VISTA, COLO., March 30, 1888.

I have been riding one of your Light Champions since September, and think they are the best wheel I ever mounted. The ball bearing head is the daisy. I rode 1,150 miles without re-adjusting and without rattle.

Respectfully, HARRY THOMAS.

ATHENS, OHIO, May 24.

DEAR SIRS—It gives me much pleasure to announce the complete satisfaction produced by your wheels here. My weight is 200 pounds, yet I rode the 52-inch Light Champion over the very roughest roads in the world, sixty-three miles yesterday, and it proved itself as stanch as the stanchest; and the ram's-horn bars are, to say the least, the most desirable handle bar made. For hill climbing they are indispensable.

I remain, very truly, DR. FRED HIBBARD.

PEORIA, ILL., May 7.

GENTLEMEN—I want to say I am more than pleased with the 52-inch Light Champion I bought of you this spring. I have given it every possible test, and it gives me great satisfaction to be to able to say that it suits me better than any wheel I have ever ridden, and I have ridden nearly if not quite all the modern wheels. It is the most rigid and by far the easiest running wheel I have ever ridden. I am well satisfied that it goes up hills much easier than any other I have ever ridden, while I know that it will outcoast anything here. Its ease of running is a most noticeable feature, and this I attribute to the ball-and-socket connection of the front forks to the bearing case. The ball head is a great advantage—perfect control and no rattle. The Cobblestone saddle is the most comfortable I have ever been on.

Yours truly, BERT. MYERS.
Captain Peoria Bicycle Club.

MASSILLON, OHIO, Oct. 28, 1887.

In regard to the Light Champion, must say I am very well pleased with it, and I think it has made a pretty good hit among the wheelmen here. They at first sight didn't seem to think much of it, but since I have made several runs on it they have changed their opinion, especially when they saw me go up hills which the rest had to walk. When I get to the top of some pretty good hill I just dismount, sit on the fence, put my cigar in one end of the handle bar and smoke through the other, and wait until the other wheelmen come shoving up their wheels on foot. One party who sells wheels had sand enough to say that my wheel was nothing but a complicated affair and would not last long, the solid rim being no good and the tire too small, and all such stuff, but it's all right. I think I will make him wish his wheel was complicated the same way that mine is before I get through with him. For my part I like all the points about it, and most of the wheelmen now call it the dandy, and as it is the only one of the kind around here, it has caused a great deal of talk.

Yours respectfully, J. W. WALKER.

HELENA, MONT., April 22, 1888.

My 56-inch full nickled wheel came in O. K. April 10th. I would have written sooner, and could have told you it was the nicest wheel in town, but I waited a few days to let you know how it would suit me going over our rough and hilly roads. Now that I have ridden it over forty miles to-day, let me tell you it is the easiest and lightest-running machine I ever mounted. The Lillibridge saddle is a daisy for long distance riding, and the ram's-horn handle bars are the very best that were ever put on the head of a machine for hill climbing and hard riding. I am more than pleased with my wheel *all around*, and the many parties that saw it say it is a bird. I am sure any persons buying the American Champion for road riding will never regret it. I am Yours, respectfully,

P. BEAUDRY.

GORMULLY & JEFFERY MFG. CO.: MARION, IND., Feb. 22, 1888.

Dear Sirs—We have a club membership of thirty-two riders, of which thirty-one ride the American Wheels, and we are well satisfied with our choice.

Yours respectfully,

M. B. EDMISTON, Captain,
NATE D. ELLIOTT, President,
D. W. WALLACE, Lieutenant,
FRED. WELLSON, Sec. and Treas. } *Marion Ramblers.*

PEORIA, ILL., Aug. 13, 1888.

GENTLEMEN—A little over a year ago I purchased from you a Champion Light Roadster bicycle, which your competitors are pleased to call a "pewter wheel." I'm not much of a judge of metal, but after hammering that wheel over about 2,500 miles of tough Illinois roads, I am convinced that the "Champ" is made of rather a good quality of "pewter," in fact, after five years' experience with such wheels as Columbias, Royal Mails, etc., I feel that I can say that the Champion is equal to any wheel on the market as regards strength, and as for easy-running qualities, it excels all.

Yours truly, JOHN L. MISNER,
First Lieutenant Peoria Bicycle Club.

LAMAR, COLO., June 27, 1888.

Ran 160 miles in twenty-three hours last week over new Kansas and Colorado roads on my American Champion; made ten miles in forty minutes, and at another time fourteen miles in seventy-five minutes. Found four Champion wheels in Garden City, Kas., all full nickeled. They do take the cake. Yours, C. C. MILLER.

JACKSONVILLE, ILL., April 30, 1888.

After considerable delay the four machines arrived all O. K. (four *beauties*). Customers are delighted. The two 50-inch Light Champions were severely tested yesterday over thirty-three miles of the roughest roads imaginable. They were simply fearful — one continuous bump from the time we left the paved streets here until we arrived on paved streets in Springfield. However, not a spoke, screw or nut became loose during the entire journey. Yours truly, McDONALD BROS.

PRINCE WELLS, THE CELEBRATED FANCY RIDER, ENTHUSIASTIC.

TACOMA, W. T., June 16, 1888.

Up to this day I have sold, as your books will show, thirty-three (33) of American cycles in Tacoma and Seattle in the past ten weeks, and the sale keeps up. Only four of another make have come to this city or Seattle, and they are of English make. This alone speaks well for American cycles. Your new Light Champions came to hand some ten days ago, and surely, for workmanship and finish, they are the handsomest and finest wheels I ever looked at. To let an old rider mount one is to sell it, and if you will only ship them fast enough, you will not overlook my name on your books for many months. In regard to the American Champion, it is useless for me to say it is far the best wheel I have ridden in the past six years, as the first wheel you shipped me February, one year ago, I still ride, and it is the same little Champion — only sixteen months old — and still stands the hard usage I give it as if it was made yesterday; and I would trust it for another year, only you have made ever so many wonderful improvements in the last year that I must have one of your latest Champions for my Australian tour, which country I will sail for late in the fall; and I hope you will ship it at your earliest convenience.

Respectfully, PRINCE WELLS,
Champion 10-mile Unicycle Rider of the World.

PORTLAND, ORE., May 25, 1888.

I have ridden seven different makes of bicycles, both English and American, and consider the American Champion the stiffest and easiest-running wheel I have ever mounted. Yours truly,

DR. A. G. SMITH.

NEW ORLEANS, LA., May 17, 1888.

In the first of a series of road races given by the Louisiana Cycling Club last week, 2½ miles, the Champion came in first, second, fourth, fifth, sixth, etc., but *not* last. Twelve entries. Best time 8:10.

Yours truly, E. C. FENNER.

BOSTON, May 7, 1888.

I make the broad statement that you make the best machine of the kind now on the market, and I do not except England. I mean mechanically, in respect to style, model and workmanship.

Yours truly,
G. L. AUSTIN, Publisher *Practical Electricity*.

FRANKLIN, PA., Nov. 31, 1887.

In making this, the last payment, I wish to say that the American Champion has proved satisfactory in every way, and that after a season's use on the roads of Western and Central Pennsylvania, it is as good as new, and as stanch and rigid as it ever was. The change from the Expert to the Champion cost me about $40, but I think that I have saved just about that amount in manual labor, reckoning that commodity at $1.50 per day. Very respectfully, CHAS. A. STEELE.

ANN ARBOR, MICH., April 16, 1888.

If you care to know what I think of my 54-inch Light Champion, received some days ago, I will give you my sentiments freely. I do not claim to be an expert rider, though I have been a rider of an Expert, but I do think I know a good wheel from a poor one, and *know* I can tell an easy-riding wheel when I ride one; and I *know* too, that my Light Champion is by far the easiest-running wheel I ever mounted. And I am not alone in my opinion. Every fellow that has tried my wheel says the same thing. Why, I tell you she runs so slick and smooth that I can not keep from crowding the pedals, just to see her spin. She is so much lighter and has not that rattle in the head, as my Expert would be bound to have. I am truly delighted with her. Very truly, LEW. H. CLEMENT.

BATTLE CREEK, MICH., April 12, 1888.

My new 55-inch Light Champion far surpassed my expectations. It is the handsomest wheel that I have ever seen, and every one who sees it says the same. It is the easiest running wheel that I ever mounted. Wherever I show my wheel it is a case of "love at first sight"; no one can find fault with it. Yours very truly, CHAS. E. ZANG.

BON HOMME, DAK., March 10, 1888.

I have ridden the American Champion about fifty miles since I got it, and have had an opportunity to test the machine on all kinds of roads. It is the handsomest, the most rigid, the easiest-running and steering roadster I have ever tried, and I have ridden nearly every wheel manufactured. Have tried coasting with several well known makes, and it runs 100 feet farther than any other wheel before stopping. Have had a good many old riders try it, and they all pronounce it the finest wheel they ever rode. I believe it also possesses many valuable improvements over other wheels, and altogether I would not change my Champion for any other wheel manufactured. Yours very truly, CLARENCE GRAVES.

MASON CITY, IOWA, June 3, 1888.

I am very much pleased with the machine (a 50-inch Light Champion). The ease of running and lines of beauty of the machine can not be surpassed. The ram's-horn bars are superior to any I have ever used; in fact, the wheel is perfect in every respect, and for a light roadster I find it a most stanch and reliable machine, being superior to many machines seven or eight pounds heavier. Respectfully yours, F. A. DENNISON.

SALINA, KAS., Nov. 18, 1887.

I have had one of your 54-inch American Champion bicycles since last July, and am so far much pleased with it, in fact, would not exchange for any other make of machines I have yet ridden, Columbia Expert included. In Salina we have six of your machines — three Safeties.

Respectfully, A. W. CONNER, Box 150.

INDIANAPOLIS, April 30, 1887.

GENTLEMEN — Your American Light Champion was received last week. Since trying it I have had every reason to be satisfied with the wheel. The bearings run well, the machine light, and the wheel rigid as a board; the ball head has a perfectly free movement, without being too complicated; there is a good throw to the cranks that makes every kick count, but when it comes to the handle and bar, you have simply beaten your own record. A person with as short arms as I have is in a position to appreciate bars that are easily adjustable to any length of arm; besides, you can get just the right purchase for a good solid pull. Every time I show the wheel to some cycler it is a case of "love at first sight." There will be many more to keep it company before long.

Yours truly, GEORGE S. DARROW,
Editor *Wheelman's Gazette and Record.*

BLOOMFIELD, N. J., Nov. 13, 1888.

MESSRS. GORMULLY & JEFFERY:

Gentlemen — I have just beaten my last week's record of two round trips on Eagle Rock Hill, by riding it up and down four times yesterday.

My ride of four round trips made on the afternoon of November 13th was witnessed by Mr. Philip Young, Mr. Wendell, M. Strong and Mr. Wm. Lamson, all of Montclair, N. J.; by Mr. John Sherman, of Lynn, Mass.; Mr. Raymond Ball, of Orange, N. J.; Mr. George Oakes, of Bloomfield; Mr. Fred. Coningsby, of Brooklyn, and Mr. Wm. Van Wagoner, of Newport, R. I. Start made at willow tree at 4-17-20 p. m. The first trip up was finished at the sign "No Trespassing," at 4-26-56, making 9 minutes 36 seconds for the climb. The summit was reached on the second trip at 4-44-25; third trip at 5-04-56; fourth trip at 5-27-00. The wheel I rode in this climb was a 52-inch Light Champion, with cranks at 5½ inches.

Respectfully, JOHN V. L. PIERSON, M. E.

THE AMERICAN RAMBLER.

Original, Safe, Speedy—Can be Ridden and Coasted Hands-off by Comparative Novices.

DENVER, COLO., Oct. 30, 1888.

DEAR SIRS—I have ridden an ordinary bicycle for the past nine years, and after changing to the American Rambler, which I purchased of you last week, must say in justice to that wheel (the Rambler) that it is, without exception, the easiest-running and speediest machine that I have ever ridden or seen. Its lines and the fine material used in its construction will insure its standing hard use. HORACE BEDDO.

THOMASVILLE, GA., Dec. 13, 1888.

GORMULLY & JEFFERY MFG. CO., Chicago, Ill.:

Gentlemen—After eight years of experience in bicycle riding, I take great pleasure in saying to you that I find your Rambler the only practical machine for hills and sandy roads that I have as yet mounted.

Yours truly, W. F. MOSS.

ELMIRA, N. Y., Dec. 3, 1888.

GORMULLY & JEFFERY MFG. CO., Chicago, Ill.:

Gentlemen—I have now ridden the Rambler which you sent me something over 500 miles. Have not had anything broken, and it is in perfect repair to-day. Have only been obliged to adjust one bearing in that time.

I am more than pleased with it, and find it very steady to steer, on account of the long bearing of the head. It is also very easy-riding on pavements and rough roads. The large spring in the frame under the seat seems to me the most desirable feature I have found in any machine.

I believe it to be the wheel of the future for touring and road riding.

Yours truly, OTIS DOCKSTADER.

LYONS, KAS., Dec. 3, 1888.

THE GORMULLY & JEFFERY MFG. CO., Chicago, Ill.:

Dear Sirs—I like the American Rambler. I am delighted with its easy-running, easy-steering, stanch construction and handsome appearance. For rough or hilly roads it is the only wheel.

Yours truly, J. H. EVEREST.

PEORIA, ILL., Dec. 3, 1888.

GORMULLY & JEFFERY MFG. CO., Chicago, Ill.:

Dear Sirs—We have sold a number of Ramblers, with uniformly satisfactory results. We are immensely pleased with the machines ourselves, and our customers have, without exception, expressed their warm approval of its many especially favorable qualities. The difference in weight and exceptional ease of running and the capability of being ridden without hands are all points which, in addition to its perfect Safety, makes it deservedly a wonderfully popular machine. There is no reason why next season it should not more than hold its present position in the very front rank of Safeties of its class. We are looking for a large trade on it next year. Very truly, GEO. W. ROUSE & SON.

BELLAIRE, OHIO, Dec. 4, 1888.

GORMULLY, JEFFERY & CO..

Dear Sirs—My experience with the Rambler is most flattering as compared with the Ordinary. It is superior in every way for the every-day rider; that is, men who use bicycles in their every-day business. Easy to steer, easy to propel, a good hill climber, and always at hand, as there is no need of a lamp post or a house to lean it against—the curbing is good enough. The Rambler has many admirers here. It's a much handsomer wheel than the other safeties in this country. One to appreciate the good qualities of a Rambler must get astride of one, and then its superiority over other wheels is easy to be seen. The Perfect-Fit handles and ram's-horn handle bar will speak in loud terms for themselves.

Yours respectfully, DR. D. W. BOONE.

LOCK HAVEN, PA., June 18, 1888.

GORMULLY & JEFFERY MFG. CO., Chicago:

Gentlemen—The American Rambler I ordered from you arrived safely, and I have given it a thorough test. I can say honestly it is the best wheel I ever rode, and a perfect beauty. Please tell me how high you can gear one of these Ramblers, and oblige

Respectfully, JNO. T. GIFFORD.

CHICAGO, Dec. 3, 1888.

MESSRS GORMULLY & JEFFERY MFG. CO., City:

Gentlemen—I am pleased to say that I am delighted with the Rambler, and find its use both a charming recreation and healthful and exhilarating exercise. Notwithstanding my age and infirmities, I covered about fifty miles of boulevard yesterday, and was as fresh and frisky as a kid at the conclusion of the run. Truly yours, A. T. McCARGAR.

BINGHAMTON, N. Y., Nov. 10, 1888.

GORMULLY & JEFFERY MFG. CO., Chicago, Ill.:

Please pardon the delay, but until last week I had no chance to give the 48-gear a trial, and have found that, for ordinary road riding, it is decidedly an inconvenience as compared to the 54-inch; I therefore send you the old 54-inch, 48-inch and axle; please credit. On the trial I spoke of there were two Victors and one 48-inch Star. I can only say that I did no walking on the hill they did. It was a great success for the Rambler.

Yours truly, W. H. EARLE.

ROCHESTER, N. Y., Dec. 4, 1888.

MESSRS. GORMULLY & JEFFERY MFG. CO., Chicago, Ill.:

Dear Sirs—I am more than delighted with my American Rambler. Never rode a machine that I liked as well, as the spring makes it ride as smooth as a carriage. I bought it for exercise on account of poor health, and now find it a first-class investment, as I will save its cost in two years in street car fares and the pleasure of cycling for nothing.

Yours truly, H. E. WELCHER.

BOSTON, MASS., Dec. 4, 1888.

GORMULLY & JEFFERY MFG. CO.:

Dear Sirs—As a dealer I wish to express my satisfaction with your wheels as supplied to me in the past. I have handled almost all makes since 1877 up to the present time, and I am free to say your wheels give the best satisfaction, and your Rambler is far ahead of all the other rear drivers now in the market. In construction, workmanship and price it leads them all, and will be in great demand next season.

Respectfully yours, J. S. MURRAY.

SNOW HILL, MD., Nov. 22, 1888.

MESSRS. GORMULLY & JEFFERY MFG. CO.:

Gentlemen—I have been using the American Rambler (which you shipped me) about two weeks, and like it because I can not help it. I ordered it for a sample, and did not have the slightest idea that I would like to use it myself; but it is simply impossible for a person to use the Rambler a few days and not fall in love with it. I might say that my fondness for it is not caused by timidity, for I feel just as safe when riding the Champion as I do when walking, but I like it for its real merits. It is all that you claim for it, and more. It runs easy, is much easier to steer and balance than the Ordinary, and can be run in narrow paths and ruts with much more ease than any other wheel I have tried. It also beats them all in crossing ruts and all kinds of rough places; in fact, it is just the machine for all who ride for health, pleasure or business. I like the Rambler much better than any Safety on the market, and you will do well to make up a good stock of them, as I think they will be in great demand next season. Respectfully yours, J. W. VINCENT.

SAN FRANCISCO, CAL., Oct. 19, 1888.

MESSRS. GORMULLY & JEFFERY MFG. CO., Chicago:

Gentlemen—I met a new rider this morning on a Swift coming down the avenue. I saluted him with my hand, and when he attempted to return it he fell off his wheel. If he had had a Rambler he could not have fallen off, because it would have run right along without any trouble at all. Yours very truly, BYRON JACKSON, M. P. G.

FORT WAYNE, IND., Oct. 13, 1888.

GORMULLY & JEFFERY, Chicago, Ill.:

Gentlemen—I want to say to you that I am having lots of sport with the Rambler, it does its work well. I have ridden it over the city all hours of night, and can say that I find it just what you say of it, and am sure it will carry my weight anywhere a wheel can run. I now weigh 230½ pounds and stand six feet one inch.

Yours truly, H. M. DEIHL, Chief of Police.

G. & J. MFG. CO., Chicago, Ill.:

Dear Sirs—I honestly think the Rambler is the best and easiest running of any of them. I have actually coasted more than a mile on it, and some of the way was up hill. Now, I am going to tell you a story about the coasting qualities of the machine. On the road to Lake Harriet there is a down grade—not a hill, remember—and at the foot of the grade there is a bridge that crosses the railroad track; the bridge is elevated to let trains pass under, and the approach to the bridge is very steep, about six feet in twelve—almost straight up and down; there never has been a wheel that has coasted from the top of that grade to the top of the bridge till I rode the Rambler, and I coasted from the top over the bridge and seven blocks on dead level ground, and can prove it by every member of the club. Now, don't say "chestnuts," for it is a fact.

Yours truly, G. H. BARTLETT.

ELGIN, ILL., Dec. 5, 1888.

GORMULLY & JEFFERY MFG. CO.:

Gentlemen—The American Rambler, so simple, and yet the most beautiful wheel on the market, sells itself, and to my customers it has given perfect satisfaction, as well as myself. I have not heard one complaint from any, and that is a great pleasure to your agent, I can assure you, and I would be satisfied with no other mount. Next season I am sure of a large sale for the Rambler, and I am proud to be known your agent. Yours very truly, J. M. THRASHER.

FROM JOHN A. WELLS, THE CELEBRATED HILL CLIMBER.

PHILADELPHIA, PA., Aug. 24, 1888.

GORMULLY & JEFFERY MFG. CO.:

Gentlemen—As I telegraphed you last night, I yesterday made a hill-climbing record on my Rambler, climbing Eagle Rock nine times in two hours and twenty-three minutes. I had telegraphed Howard A. Smith that I wanted to start climbing at 2 p. m. but it was 4 o'clock by the time they got the witnesses together. When I had finished the ninth trip I saw that the daylight would only last for one more trip, and as I was then way ahead of all amateur records and would not have time to beat Shurman's professional record (twelve times) I decided to stop. This record fairly pulverizes the best *previous* crank record (Fred Coningsby's three times on Safety in fifty-four minutes) and averages over two minutes each trip faster than Shurman's record.

I am delighted with the easy-running qualities of the Rambler, both on the hill and on the level. Although this is the first record this machine has scored, I predict that it will not by any means be the last.

The following are the times for each round trip in minutes, and the names of the witnesses: 14, 14¼, 16¾, 15¼, 16¼, 15½, 18, 17, 16—E. R. Collins, Westfield, N. J.; Henry Walters, 246 New York Av., Jersey City, N. J.; George J. Pforr, 64 Washington St., Chicago; Herman Kneisel, 97 Webster St., Jersey City, N. J.; Albert Lewis, Orange, N. J.; E. C. Wells, 365 Broad St., Newark, N. J.; Howard A. Smith, Oraton Hall, Newark, N. J.

Start, 4 p. m.; finish, 6:23 p. m.

The Rambler stood the strain splendidly, and is none the worse for the ride except that the tires are considerably cut by the sharp stones. The lower part of the hill was in fine condition, but the upper part where the real hill climbing comes in was unusually rough and stony.

Yours very truly, JOHN A. WELLS.

ANN ARBOR, MICH., Oct. 1, 1888.

MESSRS. GORMULLY & JEFFERY, Chicago, Ill.:

Dear Sirs—The Rambler came O. K., and is a beauty. A Veloce Columbia rider after trying it says: I hate to go back on my own wheel, but the Rambler certainly runs more easily. Very truly,

LEW H. CLEMENT.

PRINCETON, ILL., Dec. 10, 1888.

GORMULLY & JEFFERY MFG. CO., Chicago, Ill:

Gents—I am more than pleased with my American Rambler. It is exceedingly *easy* running, and it is a perfect pleasure to ride it. It is perfectly rigid, and a most excellent hill climber. Its coasting facilities are simply grand. To purchasers I would say, buy the American Rambler for comfort, speed, security and economy. In my opinion it is the best wheel in the market. Very respectfully, FRANK A. JOHNSON.

MCPHERSON, KAS., Dec. 12, 1888.

J. H. EVEREST, General Agent, Lyons, Kas.:

The American Rambler purchased of you last summer gives entire satisfaction in every respect. It is certainly the most practical road wheel made, for it is both speedy and safe. Very respectfully,

E. O. EYMAN.

LITITZ, PA., Dec. 6, 1888.

GORMULLY & JEFFERY MFG. CO.:

Gentlemen—I am so well pleased with the merits of the American Rambler that it will be my hobby next season, '89. I don't know of any other rear-driving Safety that embraces as many good points as the Rambler. Yours truly, JOHN G. ZOOK.

SENECA FALLS, N. Y., Dec. 7, 1888.

MESSRS. GORMULLY & JEFFERY:

Gentlemen — The Rambler bicycle, which I purchased of you through Mr. H. P. Usher, your agent, has so far given the best of satisfaction. All the riders in this vicinity who have tried it, say that it is the smoothest and easiest-running machine they have seen. The mechanical construction is first-class in every respect, and all parts seem to possess ample strength without undue weight. Yours very truly, W. J. POLLARD,

Superintendent of Rumsey & Co. (Limited) Pump Works.

MILLVILLE, N. J., Dec. 14, 1888.

GORMULLY & JEFFERY MFG. CO., Chicago, Ill.:

Dear Sirs — I want a new mount soon; have been trying several makes of rear-driving Safeties; now have a Rambler hired for one month. The machine has points ahead of any I have either tried or examined, and in steering is quite superior. The smaller front wheel is lighter to handle and more easily controlled; the ball head is excellent; the spring in the frame absorbs the vibration without the jumping motion of the Victor. The sprocket wheel fast to the crank; and the detachable link chain do away with all fear of the chain breaking, as it could be easily doctored on the road, and I will acknowledge I am old-fashioned enough to prefer the solid felloe and direct spoke. I can keep that wheel in order myself, and there is no trouble in putting in a tire. I am an old-time wheel man, do a great deal of road riding, and now have a New Mail—my seventh machine. I expected my son to take that wheel, but believe I will sell and get two Ramblers. Truly yours, THOMAS B. SOMERS.

POTTSTOWN, PA., Dec. 6, 1888.

GORMULLY & JEFFERY MFG. CO., Chicago, Ill.:

Dear Sirs— I want to say a good word for the American Rambler. It is the best wheel for hill climbing that I have tried during an experience of five years. The matchless comfort of its saddle and saddle spring, in connection with its style of construction, renders it delightful as a vehicle of travel; while the ease with which it can be mounted, its lowness to the ground, thus avoiding the objectionable head wind, and its entire safety feature, all contribute to place it far ahead of any other bicycle. The American Rambler is bound to attain a popularity exceeding that of any other wheel ever coming before the American public.

Respectfully, A. M. SCHEFFEY.

FERGUS FALLS, MINN., Dec. 8, 1888.

GORMULLY & JEFFERY MFG. CO., Chicago, Ill.:

Gentlemen — In reply to yours, I am very much pleased with the Rambler. I have tried it on hills, and find that I can ride up hills with the Rambler that no other riders have made. I have also tried it on very rough prairie ground, and have gone over hummocks as high as eighteen inches without any trouble. It is also very easy steering, could ride it without holding the handles, with little practice. The Rambler will be the coming machine next season.

Yours truly, HARRY SVENSGAARD.

SELMA, ALA., Dec. 7, 1888.

MESSRS. GORMULLY & JEFFERY:

Dear Sirs — We think the Rambler Safety beats them all. It is safe, easy to manage, and goes through sand and very muddy and rough roads like a daisy. We think it the best wheel out.

Yours truly, J. K. GOODWIN.

SUTTON, NEB., Dec. 6, 1888.

GORMULLY & JEFFERY MFG. CO., Chicago, Ill.:

Gentlemen — In regard to Rambler, would say that it has given entire satisfaction. It is pronounced by all who see and try it the best bicycle in the market. I have not tightened a bearing since I have had it.

Yours, THEO. WENTZ.

DALLAS, TEX., Dec. 5, 1888.

GORMULLY & JEFFERY MFG. CO., Chicago, Ill.:

Dear Sirs — I will state that I have been an active wheel man for the past ten years, have ridden all makes of wheels, both foreign and of home manufacture, and can cheerfully and honestly say that I have never yet ridden a wheel that gave me the satisfaction or realized my ideal of a perfect wheel more thoroughly than your justly celebrated Rambler.

Every rider of your Rambler that I have met has, without exception, been loud in sounding its praise.

Yours truly, H. J. BLAKENEY.

DUNKIRK, N. Y., Dec. 6, 1888.

GORMULLY & JEFFERY MFG. CO., Chicago, Ill.:

Gentlemen — I have ridden the American Rambler on all kinds of roads, and I can say it is the easiest riding wheel I ever mounted, and although it was geared to 60 inches, ran as easy as any other safety geared from 52 to 55 inches, and could mount hills with apparently as much ease as on smaller geared wheels. The spring frame is the acme in such matters—just enough and no more.

Yours truly, H. H. DICKINSON.

L. A. W. 15289 and Local Consul.

INDIANAPOLIS, IND., Dec. 7, 1888.

GORMULLY & JEFFERY MFG. CO.:

Gents— My opinion of the Rambler is that it is a first-class machine in every respect, containing first-class material, with many new and novel improvements.

Yours very respectfully, H. T. HEARSEY.

INDIANAPOLIS, IND., Dec. 6, 1888.

Dear Sirs — The Rambler that I bought of you about three months ago has given me the best of satisfaction in every respect. I have ridden it in all kinds of weather, over all kinds of roads, and nearly every day since I got it. I bought it for use, and have made good use of it. I have ridden it not less than 500 miles in the time I have had it, and the more I ride it the better I like it. I have found it easy to propel, and comfortable to ride over rough roads, and at the same time so substantially built as to stand some pretty rough usage. I have taken and shall take pleasure in recommending the Rambler to those contemplating buying a wheel. Yours very truly, E. M. GOODWIN.

NORTHAMPTON, MASS., Sept. 10, 1888.

MESSRS. GORMULLY & JEFFERY:

Gents — I purchased an American Rambler of your Hampshire county agents, E. E. Wood & Son, about September 1st. My first trip, forty-three miles, was made easily, and I surprised every one by my hill climbing and handling of the machine. It is the first Safety that I ever rode, or tried to ride. The finish is the best I ever saw, and every one who has seen it is delighted with it, and I am — well, I'm tickled all over, and would not give my Rambler for ten of the best Ordinaries I ever saw, if I had got to ride them. Yours truly, HERBERT S. CAMPBELL.

OUR CELEBRATED AND ORIGINAL RAM'S-HORN BAR.

Unquestionably the most practical handle bar ever used on a bicycle.

Price, hollow, for our own machines	$ 7 90
" solid, " " "	5 70
" hollow, for other makes	10 00
" solid, " "	8 00

We have to fit the bar to bicycles not of our manufacture, and require the forks and handle-bar attachments, if any.

CHICAGO, ILL., April 17, 1888.

Having used spade handles on my machine for a season, I was thoroughly convinced they were never to be superseded by any superior, but being persuaded to make a trial of Gormully & Jeffery's ram's-horn bar, I was surprised to see the superiority of them over the spade handles. Hereafter I shall use only the Gormully & Jeffery's ram's-horn handle bar for my machine. S. T. KIMBALL.

DETROIT, MICH., April 11, 1888.

In your letter of the 9th you ask my opinion of the ram's-horn bar. It is positively the best bar ever put on a bicycle, to my knowledge, and if you can make them to fit any wheel I can sell a dozen here at once.

C. H. SMITH.

CINCINNATI, OHIO, April 18, 1888.

We find the ram's-horn bars almost a necessity on a bicycle now.

B. KITTREDGE ARMS CO.

KENOSHA, WIS., April 18, 1888.

Yours noted. Would say am well pleased with ram's-horn handles, and think they are daisies. C. A. DICKHAUT.

BUFFALO, N. Y.

I have sold over fifty machines with the ram's-horn bars, and I have yet to see one broken or badly bent, or a rider who is in any way dissatisfied with them. J. H. ISHAM.

PEORIA, ILL., April 11, 1888.

We are enthusiastic, indeed, over the ram's-horn bar, as you will see by the send off we give it on page 6 of our catalogue. It is certainly far ahead of the spade in every respect. GEO. W. ROUSE & SON.

DAYTON, OHIO, April 10, 1888.

Replying to your letter of April 9th, regarding the ram's-horn handle bars, will state that we think they will become very popular after riders once get used to them. We find our customers are a little dubious at first, but after they have tried them they invariably like them the best. Only one of our customers has ever gone back to the cow-horn and plain handles after trying the ram's-horn. A. W. GUMP & CO.

LOUISVILLE, KY., April 11, 1888.

In regard to our opinion of the ram's-horn bar, we think it a much better handle bar than the spade. All the machines we sold so far this season, they have taken the ram's-horn bar in preference to the spade, and all riders that are using them say that they are the best handle bars they have ever used. KRAFT & ADAMS.

WARREN, PA., April 12, 1888.

Concerning the ram's-horn handles, they are the finest handles ever seen in this town, or ever put on a wheel. C. F. L. KINNEAR.

LYONS, KAS., April 12, 1888.

We think that the ram's-horn bar is far and away the best bar ever invented. It is stout, and gives a greater leverage than any other style of bar. All of our customers who have tried this prefer it. Timid riders, many of them, object to it on the ground that in case of an involuntary forward dismount, they are apt to retain the rider in their embrace. We think that this is an error, and that there is no more danger than with cow-horn bars. J. H. EVEREST.

BAY CITY, MICH., April 12, 1888.

You ask my opinion of the ram's-horn bar as compared with spade handles. In reply I would say that while I have not used the spade handles very much, yet I would prefer the ram's-horn handles as far as my experience goes. The mode of fastening the bar to the head which you use, gives a range of the whole circle in adjustments, and permits of position which the spade does not allow. The ram's-horn bars, too, never hurt the fingers in stiff pulls at hill climbing by sliding down and pinching in the angle of the handle. For speed, too, the ram's-horn bars, by their capacity for low, forward adjustment, are better than the spade. For a good lift up a hill give me the ram's-horn every time. Then in mounting, whether by the step in the rear, the pedal mount, the side vault or the vault from the rear, the ram's-horn are superior by a great deal to the spades. These are some of the considerations which incline me to favor the ram's-horn bars, especially since you have screwed the handles on.

BURT ESTES HOWARD.

MINNEAPOLIS, MINN., April 16, 1888.

I have used the ram's-horn bar on my Light Champion since May, 1887, and am highly pleased with it. I think that those who have given this bar a thorough trial will agree with me when I say that it is one of the best bars on the market. Wishing you and the ram's-horn bar success,

H. J. PUTMAN.

FLINT, MICH., April 16, 1888.

About one year ago I ordered a 56-inch American Light Champion with ram's-horn bars. I have ridden this same machine 3,109 miles, having used it in my eastern tour. I now want to give you my opinion of what I consider one of the greatest inventions ever gotten out for a bicycle, namely, the ram's-horn bar. I have found it far superior to the spade, although I thought after using the latter nearly two seasons, that they had no equal, and only tried your famous bar as an experiment — a happy one it was, too. Its advantages over the spade, as I have found them, are: Less liable to break when falling sideways; easier to mount by step, pedal or vault, as they are within easy reach; do not spread one's arms so far from the body as to tire the shoulders when long in the saddle; convenient to get "legs over" when coasting or taking a fall; never chafe the hands at thumb joints; better purchase, and consequently greater power in hill climbing; and many others that can only be appreciated by using them. During the time I used spades it cost me $5 or $6 for repairs on them. I have not paid a cent for these. While I was touring many wheel men tried my machine, and the universal expression was, "Ain't those bars slick?" "Best I ever saw," etc. As for myself, I would not go back to the spades under any consideration, providing I could get ram's-horn.

J. ELMER PRATT.

P. S. — Think your Perfect-Fit handles are going to be a great success. Like them very much. J. P.

FLINT, MICH., April 15, 1888.

They are more natural to reach than the cow-horn bar and the spade handle, and I also think they are a very desirable handle bar in coasting and hill climbing. HARRY BRIDGEMAN.

ELMIRA, N. Y., April 16, 1888.

I have used the ram's-horn handle bar for one season, and have tested it thoroughly in road riding and hill climbing. I consider it the easiest bar made. It allows a person's arms to rest in their natural position by the side, and in continuous riding one can rest his body a great deal by allowing his weight to fall on the bar, which he can not do on the spade handle or cow-horn bar. As to hill climbing, it is very evident that the closer a person's arms are to the body the more strength he has in them; consequently the ram's-horn handle has the advantage over the other makes in this respect. As to looks, it has been acknowledged by all with whom I have met to be the most graceful bar made.

C. M. JONES.

HORNELLSVILLE, N. Y., April 18, 1888.

I have used the ram's-horn bar for over a year, and think it is the finest handle bar out. For high climbing, road riding and general hard work on a wheel, it beats them all. R. M. PRANGEN.

LITTLE FALLS, N. Y., April 18, 1888.

In regard to the relative merits of the spade handles and ram's-horn bar, I would say, that for hill climbing there is no comparison, the latter being far superior to the former, but for ordinary level road riding one is perhaps as good as the other, and both are far better than any other form.

J. E. SEARLES.

PORT HURON, MICH., April 14, 1888.

I much prefer the ram's-horn to the spade handles. The spades admit of but one attitude for the hand. S. A. WOOD.

PHŒNIX, ARIZONA, April 2, 1889.

GORMULLY & JEFFERY MFG. CO., Chicago, Ill.:

Gentlemen—The Rambler was received the latter part of the past week, and your sight draft was honored on Saturday the 30th ult. I have been very busy since its arrival, but have had time to try the wheel myself, and I must confess that since it came I have not ridden my —— at all, for the Rambler runs so much prettier than any other wheel I ever rode that I do not care about riding any other. I think it rides about perfect, and I do not think you can improve on the spring over rear wheel. All the riders here have tried it, and think it is the finest riding wheel they ever saw, and several persons who never have been on any kind of a wheel before rode right away the first time they got on. I note with pleasure that it has not the disagreeable front spring the —— has, and that when riding rapidly over rough roads it is no trouble at all to keep the feet on the pedals, while on the —— Safety all the riders here acknowledge it is an impossibility. I rode it hands off the first time I mounted it, and so has every one of our —— riders here.

I have been too busy to teach any ladies to ride yet, but have had two on the machine for a few minutes, and from what they did in the short time they tried, I can see it will be no trouble at all to teach them. I note what you say in your letter of March 28th, just received.

Yours very truly, W. L. PINNEY.

POINTS TO BE REMEMBERED.

TERMS, net cash with order

ABSOLUTELY NO DISCOUNT, except to regular agents.

ALWAYS ADDRESS the firm direct, at Chicago, Ill., U. S. A. Absolutely no attention paid to letters not addressed to the firm.

HALF PRICE ONLY will be allowed for parts not taken when incomplete machines are ordered.

SEND MONEY by Postoffice Money Order, Express, or by draft on New York or Chicago.

CHARGES MUST BE PREPAID on all goods returned, with owner's name distinctly marked on a tag.

WE ARE NOT RESPONSIBLE for the safe delivery of goods beyond the postoffice, express offices, or freight depots.

GOODS SENT C. O. D. when a sufficient deposit accompanies the order to cover express charges both ways.

Small orders for parts, sundries or fittings **MUST** be accompanied by the full cash. Any excess in the remittance will be at once returned.

We warrant all of our **BICYCLES** and **TRICYCLES** to be free from imperfections in material or manufacture, and agree to make good, at any time within a year, any defects in them not caused by use, misuse or neglect. If such defects are found, the defective parts must be sent to us for examination before any claim is allowed.

OUR FACILITIES.

We have spent a very large amount of money in perfecting our equipment. We make every portion of our machines except the tires. We import the weldless steel tubing in **STRAIGHT LENGTHS**, which is then tapered and bent by our own special machinery. Under **NO CIRCUMSTANCES** do we have any part made by contract, except the tires.

REPAIRING.

We have **SPECIAL FACILITIES** for **DIFFICULT REPAIRING,** and respectfully solicit this class of work. Our charges are as moderate as those of any first-class manufacturer, and the owner runs **NO RISK** of **INJURY** to his wheel, as our mechanics have had **YEARS** of **EXPERIENCE** in this branch of the business.

In returning machines or parts to the factory, always tag them distinctly with the name and address of the sender, and notify us by letter of the date of shipment and by what Express or Railroad company sent.

222 TO 228 N. FRANKLIN STREET.

OFFICE & WORKS CHICAGO, ILL.

ERECTED & USED SOLELY FOR THE MANUFACTURE OF BICYCLES, TRICYCLES & SUNDRIES